

# Concept2 Indoor Rower Fact Sheet 2:

## Technique On The Concept2 Indoor Rower

Technique is the most important factor when using the rowing machine. If you get your technique right you'll be efficient, produce better results and avoid potential injuries.

The rowing stroke can be divided into two phases:

- The **Drive** phase where the handle is drawn away from the fan and the **Recovery** phase where the handle is allowed to return back to the fan before the next **Drive** phase. The **Drive** phase should be strong and vigorous.
- The **Recovery** phase should be steady and relaxed. **Rhythm** is the time relationship between the **Drive** phase and the **Recovery** phase. The ratio should be about 2:1 with the **Recovery** phase taking about twice as long as the **Drive** phase.

The overall stroke cycle has four segments:

- The **Finish** position
- The **Recovery** phase
- The **Beginning** position
- The **Drive** phase

Each segment is described in detail with a pictorial sequence showing the full stroke cycle.

There are three phases to developing good technique.

The first stage is developing **motor** skills to master the sequence of movements; this is the awareness stage of learning. Muscles respond to electrical impulses from the brain carried via the nervous system. Repeating a movement establishes a strong neurological pathway for these tiny impulses. Breaking the rowing stroke down into its component parts and carrying out each segment slowly until it is mastered is the best method of establishing this pathway. Gradually the segments are joined together to form the full stroke cycle.

The second stage is the **functional** stage. During the development of motor skills there is no consideration to load, this comes next. In this stage the muscles become familiar with the load, power and pace that are required to row efficiently.

The final stage is the **autonomous** stage. In this stage the muscles know their role and movements become automatic.

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The overall stroke cycle has four segments – the **Finish** position, the **Recovery** phase, the **Beginning** position and the **Drive** phase.

### **Key Point 1: The Finish Position (start of the recovery phase)**

In the **Finish** position the legs are fully extended with the body leaning back slightly to about 11 o'clock on a clock face. A strong, neutral posture should be maintained. The handle is drawn to the body and held lightly in both hands with the hands positioned so that the little fingers are over either edge of the handle. The chain should be parallel with the ground and the top row of knuckles, the wrists and the elbows should be held flat in a straight line. The elbows are drawn past the body and should not be sticking out to either side. The shoulders and arms are held loose and relaxed. Once in this position the rower is ready to start the rowing sequence.

### **Key Point 2: The Recovery Phase**

During the **Recovery** phase the handle is allowed to come towards the fan cage whilst the rower gets into position ready for the next stroke. The **Recovery** phase begins at the **Finish** position and ends at the **Beginning** position ready for the **Drive** phase to start. The **Recovery** phase starts with the arms reaching out until they are fully extended the body then rocks over from the hips into the 1 o'clock position and finally the knees bend until the body is in the **Beginning** position.

### **Key Point 3: The Beginning Position (start of the drive phase)**

In the **Beginning** position the shins are vertical, the back is still in the 1 o'clock position and the arms are fully extended. Good posture should be maintained with the back in a strong neutral position. The arms should feel loose and relaxed and the weight of the body should be on the balls of the feet. The position should feel comfortable.

### **Key Point 4: The Drive Phase**

The **Drive** phase is the power phase of the stroke where the handle is drawn away from the fan cage. It commences at the **Beginning** position where the handle picks up the load from the flywheel at the front of the stroke and ends at the **Finish** position with the handle drawn towards the body at the back of the stroke.

At the start of the **Drive** phase, the legs push down then the body begins to lever back whilst the arms remain straight. Once the legs are straight, the body stops levering back (when it has reached the 11 o'clock position). The arms then draw the handle past the knees and strongly to the body. The rower has now returned to the Finish position.

**Top Tip 1:** Check that the trunk is held firm so that the power developed on the footplate is transferred directly to the handle throughout the **Drive** phase. Make sure that the handle moves back at the same time as the seat so the legs are not just driving the rower back. A common error is for rowers to transfer stability from the trunk to the legs and use the trunk to supply power. This can go almost unnoticed at low intensity work but it is very inefficient.

**Top Tip 2:** Although the upper body is responsible for over 50% of the stroke length the legs are responsible for 70% of the total power. This is because the load is at its greatest at the beginning of the stroke and decays to the Finish. Good technique matches up the most powerful muscle groups in the legs to the greatest load and the faster muscles in the arms to the lighter but faster Finish.

Three times world champion Tom Kay illustrates ideal form.

### THE FINISH POSITION



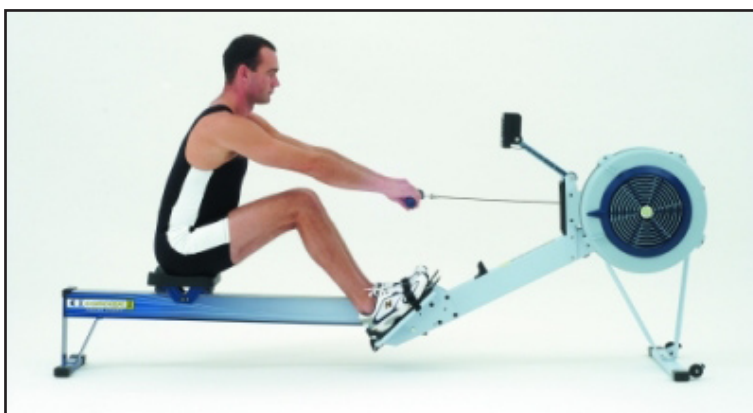
In the **Finish** position, lean back slightly to 11 o'clock position, legs flat, handle drawn to the body, forearms horizontal.

### THE RECOVERY PHASE



In the **Recovery** phase the arms reach forward until they are extended fully, then the body rocks forward from the hips into the 1 o'clock position.

### THE RECOVERY PHASE continued



AFTER the arms have fully extended and the body has rocked forward, the knees bend bringing the seat forwards while the position of the arms and body are maintained.

## THE BEGINNING POSITION



In the **Beginning** position the shins are vertical with the body pressed up to the legs. The arms are straight and relaxed. The position should not feel uncomfortable.

## THE DRIVE PHASE



At the start of the **Drive** phase the legs push down and the body begins to lever back.

## THE DRIVE PHASE continued



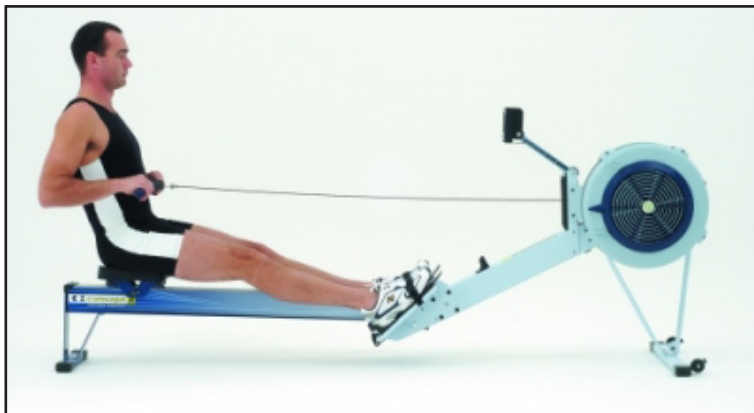
The legs continue to push as the body levers back. The arms remain straight.

### THE DRIVE PHASE continued



The legs are fully extended and the body stops levering back. The arms draw the handle past the knees and then strongly to the body, returning to the **Finish** position.

### THE FINISH POSITION



In the **Finish** position, the back is in the 11 o'clock position and the legs are flat. The handle is drawn to the body and the forearms are horizontal. You are now ready to take the next stroke.

The Recovery



**The Finish**  
Lean back slightly, legs flat, handle drawn to the body



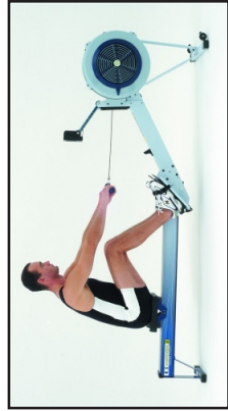
**Arms extend forward**



**Body rocks forward**  
The arms are relaxed and extend fully. The body rocks forward from the hips



**Quarter Slide**  
AFTER the arms have fully extended and the body has rocked forward, slide forward maintaining arm and body position. Hands, Body then Slide



**Half Slide**  
Continue sliding forward, maintaining the arm & body position

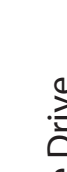
# Detailed Stroke Cycle



Holding the back in position draw the handle to the chest



**Half Slide**  
Continue sliding forward, maintaining the arm & body position



**The body stops levering back**  
The arms draw the handle to the body as the handle is drawn past the knees



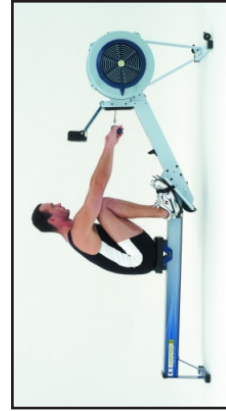
**The Drive Continued**  
The legs continue to push as the body levers back. The arms remain straight



**The Drive Continued**  
The legs continue to push as the body levers back. The arms remain straight



**Start of the Drive**  
The legs push down and the body begins to lever back



**Full Slide - the Beginning**  
Shins vertical with body pressed up to the legs. The arms are straight and relaxed. Position should feel comfortable