



中國香港賽艇協會  
HONG KONG, CHINA ROWING ASSOCIATION

# ***SCHOOL INDOOR ROWING GUIDE***



*(Source of information : [www.concept2.com](http://www.concept2.com))*

# **1. Introduction**

Sport promotes a powerful, positive image and is an essential part of any successful school. Indoor Rowing raises the profile of the school and the considerable benefits of rowing are available on dry land, including competition on an equal footing with the best rowing schools. The Indoor Rower can be used by boys and girls of all secondary ages and has the major advantage for schools of being an extremely safe and relatively risk-free indoor activity. Adding Indoor Rowing to sports provision in school could enhance the life of the school in a variety of areas:

## **An Opportunity for Individual Work**

For pupils who do not enjoy team games, gym and athletics, Indoor Rowing can be a happy alternative, since it allows them a welcome opportunity to work individually at their own level and with a degree of privacy. The monitor is controlled by them and feeds back the results of their efforts to them individually. The autonomy which is allowed by the machine is attractive to pupils who enjoy working independently. Pupils can control their own experience. They have the opportunity to plan, perform and evaluate their own work.

## **Many Applications**

Indoor Rowing meets a range of needs. It is a top-rate cardio-vascular machine, ideal for all forms of fitness training and cross-training. In addition, it is weight-bearing, so an excellent aid for pupils wishing to manage their weight, who may find other forms of exercise uncomfortable or embarrassing. It may allow pupils with some disabilities to exercise safely.

## **Competition**

The opportunities for the fun and excitement of competition in and between schools are legion. Pupils can help in the preparation, publicising and organisation of competitions; in the collection, collation, analysis and distribution of results and data.

## **Ongoing Participation and Progression**

A major benefit for young people who enjoy Indoor Rowing is the possibility of continued participation. There are many opportunities for those with the ability to progress to higher levels; Indoor Rowing is a sport in its own right, and there are many competitive events.

## **For Fitness Training**

For any individual who wishes to bring variety into their training schedule. Indoor Rowing is excellent for cross training, particularly for improving cardio-vascular fitness. The user can do a very thorough workout in safety and comfort when the weather is bad. Team members, athletes and players could make extensive and very effective use of the machine.

## **Competitions**

There are many opportunities for competition - individual, inter-form, inter-house, inter-school, even on the internet. It is also possible to consider competitions or activities between staff/parents/pupils, as well as sponsorship and fund-raising events. It is vital that competitors should observe safety procedures, particularly that they should warm-up prior to competition.

### **Individual Competition (can often be organised by pupils)**

- Lunch time 30 seconds / 1 minute sprint for all-comers. Set the timer for 30 seconds / 1 minute and record the distance covered. Age-group winners, boy and girl.
- Best pull. Warm up. Row 10 strokes hard. Record the best split (i.e. the lowest figure on the central display).
- Year or House group teams of six (three boys and three girls), each row 500 metres (or one minute, if time-row is preferred). Winning team records lowest accumulated time (or highest accumulated distance for time-row).

## 2. Using the Machine

Rowing is a great new skill. With a bit of care, you will be able to master it and do really well.

Teacher should ensure that pupils are getting it right. Take it steadily in the early stages and practise the sequence :

- starting with ARMS ONLY
- then add the BODY MOVEMENT (you should swing your body from a position of 11 o'clock to 1 o'clock)
- then gradually start to bring in the SLIDE, moving 1/4 of the way, then half, then 3/4s and finally all the way along the slide.

Even when you become good, still use this PRACTICE SEQUENCE as a warm-up.

### > Taking Care

It pays to get into good habits so that you look after yourself and don't damage the machine - some simple dos and don'ts:

### > The Right Clothes

Nothing fancy needed. Just make sure you're wearing sensible gear. No flapping clothes to catch in the seat rollers. Ensure that T-shirts are tucked in, shorts are tied up and the ties are tucked in, shoes should be laced correctly and tied tightly and feet should be firmly attached to the footstretcher with the straps provided.

### > Warm Up

Always warm up before you use the machine - do the Practice Sequence, then some stretches.

### > Damper Level

Adjust the damper lever (to 3 initially) and put the handle in the handle hook before you sit on the machine. For more accuracy the Drag Factor can be used, a Drag Factor of 120 to 135 should be chosen.

### > Footrests

Move the footrests to a comfortable position. The strap should go over the crease in your trainers.

Hold the handle with both hands.

Note: Don't try to row with one hand. Don't let go of the handle while rowing. Don't twist the chain.

## > At the End of Your Row

- . • Cool down gently by doing the Practice Sequence in reverse.
- . • Put the handle in the handle hook.
- . • Undo the footstraps and free your feet.
- . • Put the handle gently against the fan cage.
- . • Stretch.

## Using the Machine Safely

Some routine precautions for your safety and comfort:

- Check the handle, seat and monorail are clean - no dust or sweat.
- Adjust the damper setting and place the handle in the handle hook before securing your feet.
- Adjust the footrests. If you have long legs you may need to lower the footrests. Fasten the straps securely.
- Sit slightly towards the back of the seat.
- Pull straight back with both hands. Do not row with one hand.
- Do not twist the chain or pull from side to side.
- Do not let go of the handle whilst rowing.
- Keep clothing, fingers and children away from seat rollers.
- When you finish your exercise place the handle in the handle hook.
- After you have released your feet place the handle against the fan cage.
- Ensure the machine is properly and routinely maintained.
- T-shirts should be tucked in, shorts tied up and the ties tucked in and shoes should be tied correctly.

## Using the Monitor

(Please refer to Appendix 1a – PM2 Monitor User Manual, Appendix 1b – PM3 / 4 Monitor User Manual)

## **3. Technique**

### **Developing Good Technique**

The handbook is structured in the same way as the video. It begins by providing an overview of the rowing stroke and then breaks the stroke down into an easy to learn sequence of movements. This is separated into two clear stages:

Stage 1 - The Arm and Body Movement;

Stage 2 - The Slide.

Practise each element of these stages before progressing to the next. Make sure you have mastered all the points of technique in Stage 1 before moving to Stage 2. A more detailed stroke sequence is illustrated on pages 10 & 11.

Provided you follow this easy to learn sequence you should develop a very safe and efficient technique. However, if you have already developed some faults the section on fault identification will be invaluable. It clearly illustrates a number of the most common technical errors with their solutions.

### **Developing Rhythm**

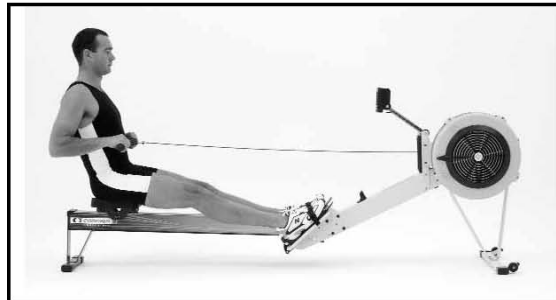
When you have mastered the rowing stroke and are clear about the sequence of movements you can begin to develop rhythm in your rowing. Rhythm is the time relationship between the Drive and the Recovery. The ratio is about 2:1, the Recovery takes about twice as long as the Drive.

The Drive is the power phase of the stroke and should be strong and vigorous. The Recovery is steady and relaxed. The full stroke should be smooth and rhythmic and there should be no discomfort at any part of the stroke cycle. Discomfort usually indicates that you are doing something wrong (check the Fault Identification section).

In the early stages, ignore the monitor and focus on establishing the correct technique. Concentrate on developing a controlled and fluid movement, with effective use of the legs, body and arms in the Drive. Once you can row comfortably for about ten minutes in a smooth,

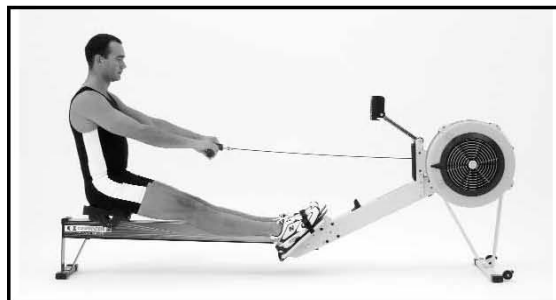
### The Finish

- The legs are flat.
- The handle is drawn to the body and held lightly.
- The body is inclined slightly back.
- The elbows are drawn past the body. The forearms are horizontal and the wrists flat.
- The shoulders are down and relaxed.



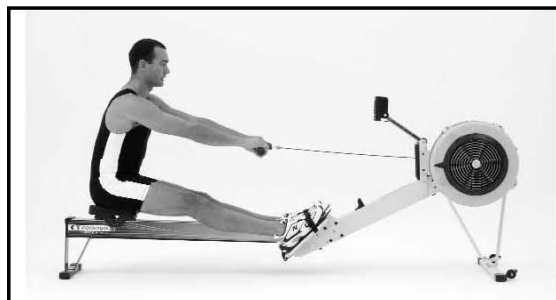
### Arms extend

- The arms are relaxed and extended fully.
- The body rocks forward from the hips.



### The Body Rocks forwards

- The body rocks forwards from the hips.



### The Slide

- AFTER the arms have fully extended and the body rocked forward, slide forward maintaining arm and body position. Legs should be parallel throughout the recovery to prevent knees touching or legs splaying apart.



### THE DRIVE

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



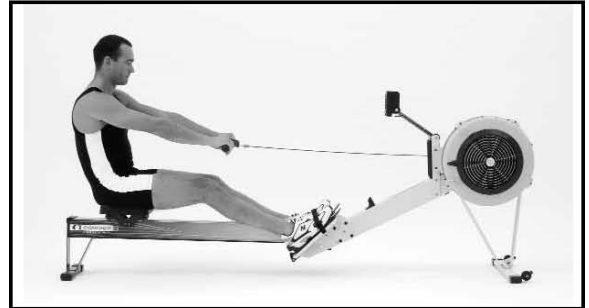
### **The Start of the Drive**

- The legs push down and the body begins to lever back.
- Do not start to use the body too early.



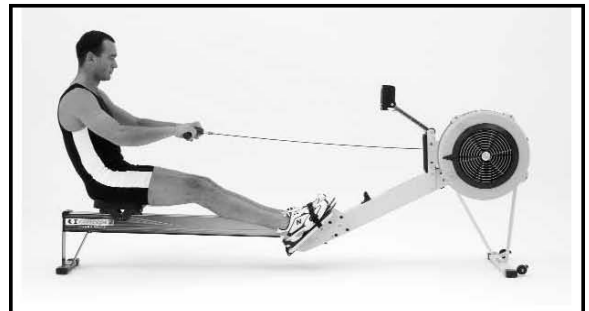
### **The Drive continued**

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



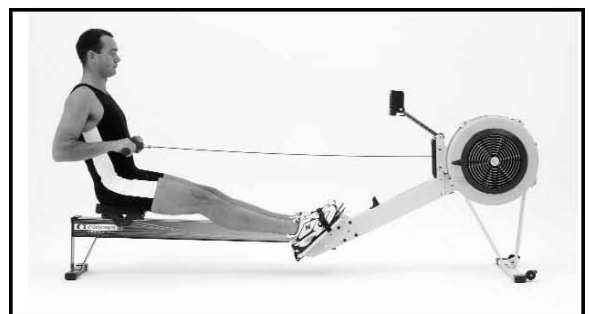
### **The body stops levering back**

- The arms draw the handle past the knees and then strongly to the body, returning to the Finish position. Legs flat. Forearms horizontal.



### **The Finish**

- Lean back slightly, legs flat, handle drawn to the body.
- Forearms horizontal.
- You are ready to take the next stroke.



There are two phases to the rowing stroke: i) The Recovery; and ii) The Drive

From the Finish position move forward up the slide (the Recovery) to the Beginning of the next stroke. Without pausing, press back and begin the Drive. The full stroke should be smooth and rhythmic with a ratio of about 2:1. The Recovery takes about twice as long as the Drive. Aim for a smooth accelerated Drive and a steady, relaxed Recovery.



## Fault Correction

### Fault

#### Rowing with Bent Arms:

When the arm supports a load in one position the muscle remains contracted. Contraction expels blood from the muscles reducing the oxygen supply, increasing lactic acid build up and hastening fatigue.



The rowers starts the drive by pulling with the arms rather than pushing with the legs.

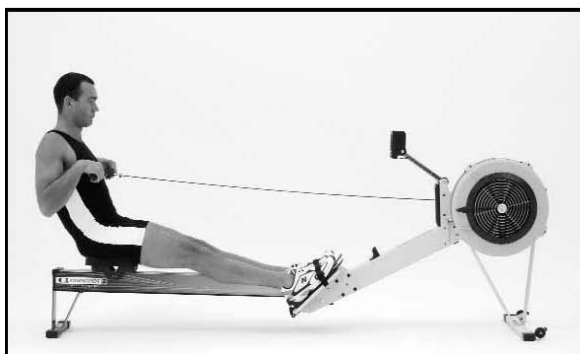
### Correction



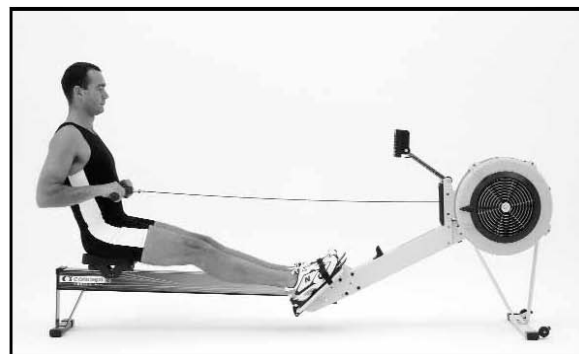
The Drive should start by pushing the legs and bracing the back with the arms fully extended and relaxed. The arms connect the legs and the back onto the handle.

#### Rowing with Bent Wrists:

Work can be carried out more efficiently and the risk of injury reduced when the load passes through the centre of the joints.



Finishing with bent wrists.



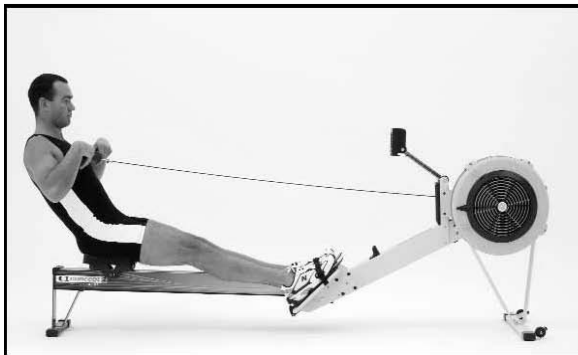
Always row with FLAT wrists. Check the hands at each stage of the Drive.

## Fault

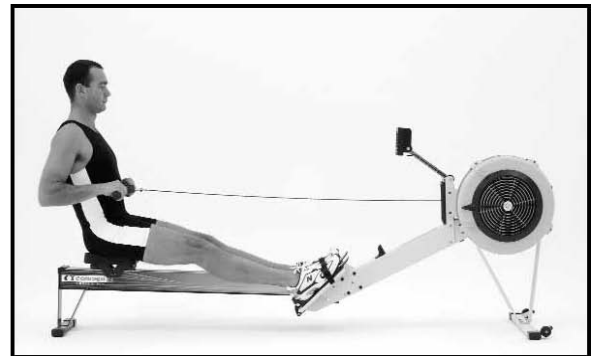
## Correction

### **Pulling Up too high and leaning back too much:**

Leaning back too far requires a great deal of energy to swing the body back through the upright position. The energy costs are greater than any gains through rowing a longer stroke.



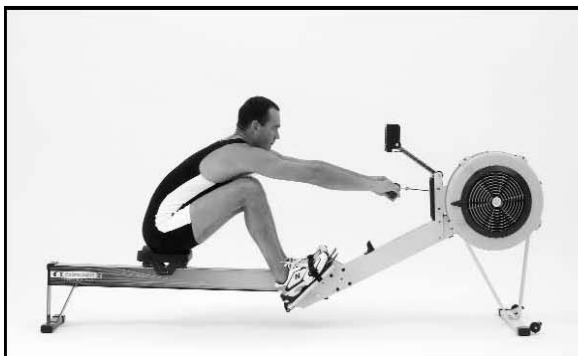
At the finish of the stroke, the rower pulls the handle up too high and leans back too far.



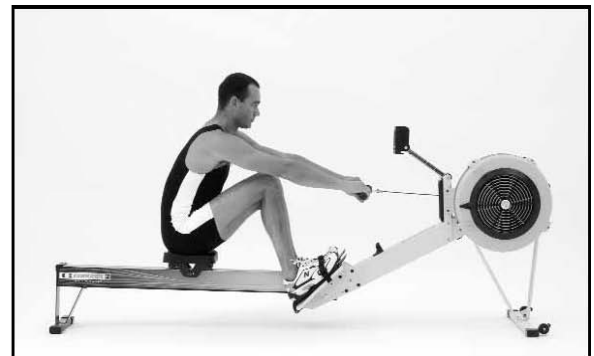
Draw the handle into the body. The wrist should be flat with elbows drawn past the body, forearms horizontal.

### **Slide Shooting**

The legs are the most powerful muscles in the body and are used to start the acceleration of the flywheel, which represents the greatest load. Any movement of the seat should result in a corresponding movement of the handle or the legs are not being used to the greatest effect.



The legs push away too early, the back is not braced and so the power is not transferred onto the handle.



The legs begin the drive and the body moves back with straight arms transferring the leg power onto the handle.

## Fault

### **Using the back too early:**

Using the back too early means that the weaker muscles are taking on the greater load and stronger muscles are used when the load has decreased.



The rower starts the Drive by swinging the body back rather than pushing the legs. This results in a weak movement.

## Correction



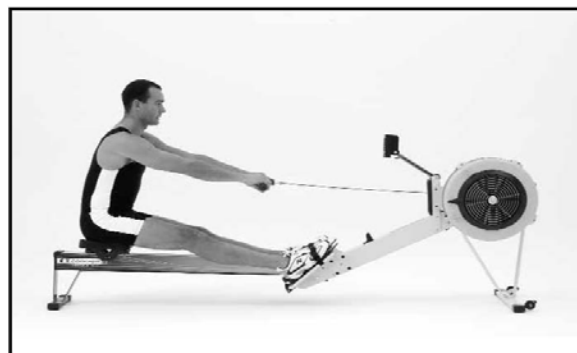
The legs begin the drive and the body leans back with the arms fully extended and relaxed.

### **Knees up too early**

At the beginning of the stroke you need to be balanced and in control in order to develop maximum power. If the recovery sequence of hands, body then slide is not carried out correctly then this will mean a last minute adjustment at the beginning of the power phase, throwing you off balance and out of control.



On the recovery the rower slides forward before the handle has extended past the knees. The handles either hit the knees or they are lifted up to clear the knees.

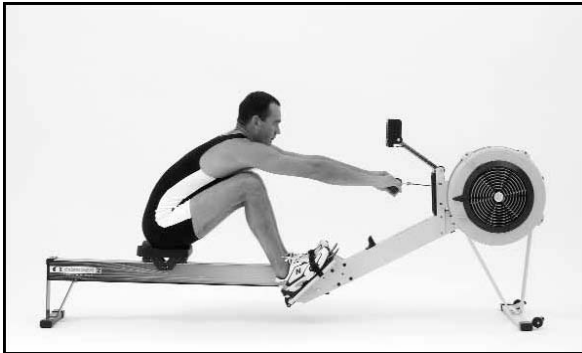


The recovery sequence - hands, body then slide. After the arms have fully extended and the body has rocked forward, slide forward, maintaining the arm and body position.

## Fault

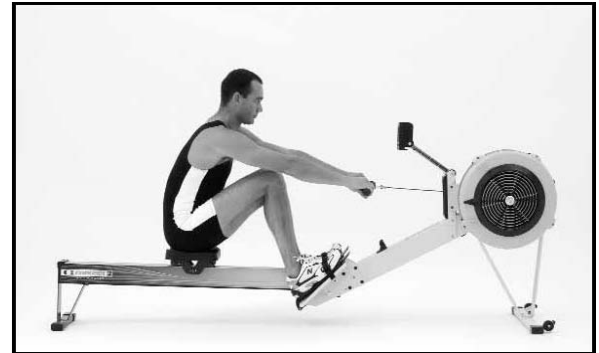
### **Over reaching:**

Over reaching at the beginning of the stroke places the lower back at maximum flexion. If you then load it up there is a risk of damage in this area.



The body stretches too far forward. The shins may be past the vertical. The head and shoulders tend to drop towards the feet. The body is in a weak position for the Drive.

## Correction



The shins are vertical. The body is pressed up to the legs. The arms are fully extended and relaxed, body tilted slightly forward. This position should feel comfortable.

### **Body too tense. Grip on handle too tight**

The only muscles that should be contracted are those directly involved in moving the flywheel. Any muscles in the shoulders and neck that are not directly involved will just drain energy if tested.



Teeth are clenched, shoulders hunched and the rower is gripping the handle too tightly.



RELAX! Relax the shoulders down, unclench the teeth and relax the jaw. Keep a LIGHT hold on the handle.

## Fault

### **Pulling the body to the handle:**

Of you pull the body towards the handle there is an energy cost that will not add anything towards moving the flywheel.



At the Finish, the rower, instead of pulling the handle to the body, pulls himself forward to the handle.

## Correction



At the Finish the rower leans back slightly, holds the legs down and draws the handle to the body using the upper body as a firm platform.

## **Suggested Lesson Plan**

(Please refer to Appendix 2)