

1. A Long Oar Stroke

Problem	Effects	Possible Causes
Angle of rowers legs too small when leaning forward	<ul style="list-style-type: none"> >Insufficient work in the water >Insufficient forward driving force (push) >Uneconomic use of effort 	<ul style="list-style-type: none"> >Stretcher incorrectly adjusted (height, angle, longitudinal direction) >Lack of flexibility on the part of the rower >Gate not high enough >insufficient body height >inboards too small >feelings of insecurity when legs are stretched out
Angle of rowers forward lean too great	<ul style="list-style-type: none"> >Encourages "bum shoving" >Rower ducks trunk of body when stretch out 	<ul style="list-style-type: none"> >Stretcher too low >trunk between knees
Backwards lean too small	<ul style="list-style-type: none"> >Insufficient room for oar-stroke >No room for inboard and hands 	<ul style="list-style-type: none"> >Distance between slide and gate >Dimensions of the inboards >Strength in the shoulders and upper body
Upper body leans over inboard	<ul style="list-style-type: none"> >Oar stroke not balanced >Reduction of forward thrust >messy finish 	<ul style="list-style-type: none"> >Muscles of shoulder and upper body underdeveloped >Position of the head

Possible Remedies

- >Check the dimensions of the boat, adjust the oars and the distance between the gates
- >Flexibility training
- >Balancing exercises (in the case of any lack of confidence)
- >Strengthening of the shoulder and back muscles
- >Rowing with fixed seat and square blades with gradual lengthening of the oar stroke
- >Let new rowers row with a crew that can row correctly

2. Rapid Connection Onto The Water And Exertion Of Pressure

Problem	Effects	Possible Causes
Missed oar stroke (oar blades too far away from the water "skying")	<ul style="list-style-type: none"> >Too short a stroke in front of the gate >Forward driving force too weak 	<ul style="list-style-type: none"> >Insufficient flexibility in the shoulders >Height of the rigger >Position of the head and hands
Arms bent too early	<ul style="list-style-type: none"> >Forearms cramp >Body leans too shortly forward >Ineffective use of arms causes fatigue 	<ul style="list-style-type: none"> >Upper part of body too upright (stiff) >Hands in the wrong position >Lack of balance when leaning forward
Premature use of upper trunk	<ul style="list-style-type: none"> >Favours vertical movement >Ineffective use of strength due to neglect of leg muscles 	<ul style="list-style-type: none"> >Angle of stretcher too sharp >Heels too high >Missed oar stroke (upper trunk straightens) >Inboard too hard
"Bum Shoving" pushing the legs and hips backwards before driving the oar through the water	<ul style="list-style-type: none"> >Ineffective transfer of strength >Back complaints 	<ul style="list-style-type: none"> >Underdeveloped back muscles >Position of head >Inboard too hard >Lack of ability to coordinate limbs

Possible Remedies

- >Coaching in flexibility, relaxation
- >Strengthening of the muscles under stress
- >Verbal hints e.g. on position of the head
- >Check dimensions of the boat (inboard, stretcher, rigger and fittings)
- >Getting a feel for the rowing position by scrapping the oars over the water up to the catch
- >Rowing only with the inside arm
- >Exaggerated movements e.g. sliding both hands down the loom to the gate
- >Have the crew row with a team that can row properly

3. Minimising Vertical Movements

Problem	Effects	Possible Causes
The upper body moves jerkily during the final pull on the oar	<ul style="list-style-type: none"> >The boat pitches, causing movements that sap the rowers strength >Rower pulls on oars with maximum strength several times per stroke 	<ul style="list-style-type: none"> >Stretchers are mispositioned >Strength lacking in arms >Incorrect understanding of movement
Extreme straightening of the rowers body	<ul style="list-style-type: none"> >Inboards lifted over the knee >Upper body collapses after final pull of the oar <The boat rocks 	<ul style="list-style-type: none"> >Rigger (gate) too low >Incorrect understanding of movement >Spine too stiff
Extreme backwards lean	<ul style="list-style-type: none"> >Reduction of pressure on the oar >Straightening of the upper body costs time and strength >The boat pitches 	<ul style="list-style-type: none"> >Incorrect understanding of movement >Insecure balance in the first part of the oar stroke >Stretcher needs adjustment
The upper body jerks into the forward position	<ul style="list-style-type: none"> >Oar stroke misses the water >The boat loses speed 	<ul style="list-style-type: none"> >Stretcher needs adjustment >The sliding seat jerks to a stop >The upper body does not accompany the seat when it slides

Possible Remedies

- >Correct the rowers understanding of movements through demonstration and explanation e.g. with the use of videos of very good teams
- >Check the adjustments of the boat and stretcher
- >Rowing without an oar (pitching too and fro)
- >Demonstrating the movement with pictures
- >Training in flexibility
- >Rowing slowly with a low stroke frequency from ten strokes/ to twenty strokes per minute
- >Rowing with square blade with the inside arm and then the outside arm
- >Rowing with the hand gripping the oar 20-30cm closer to the gate

4. Even Speed and Acceleration of Oar Movements

Problem	Effects	Possible Causes
The oar blade is used like a saw	<ul style="list-style-type: none"> >Oars are used less effectively >Lower Arms become cramped 	<ul style="list-style-type: none"> >Height of rigger >Angle of oar >Quality of the oar >Position of the hands >The arms are incorrectly coordinated
The legs push unevenly during the stroke	<ul style="list-style-type: none"> >Uneven pressure during each stroke >Oars are used less effectively >The rower may become tired quickly 	<ul style="list-style-type: none"> >Adjustment of the stretcher >Hip or leg muscles are not strong enough
The oar blade turns in the water	<ul style="list-style-type: none"> >Braking effect, requiring extra effort >Onset of fatigue >Rower catches a crab with the oar 	<ul style="list-style-type: none"> >Stretcher too far forward in the bow >Rigger set too low >Incorrect understanding of moveemnt >Premature breaking off of the oar stroke
Hands to slow or too fast	<ul style="list-style-type: none"> >Speed peaks >Braking effect when raising oar out of water >Oar stroke broken off too soon 	<ul style="list-style-type: none"> >Lack of power at end stage of oar stroke >Wrong instructions on how to move >Lack of cordination
Jerkyor uncoordinated use of inboards	<ul style="list-style-type: none"> >Balancing problems >Loss of speed >Coordination problems with the team 	<ul style="list-style-type: none"> >In sculls: Compare height of riggers >Over long strokes >Lack of coordination

Possible Remedies

- >Expanation of actions
- >Let the crew row with a good team
- >Have the crew row with square blades, including more rapid strokes
- >Check the dimensions of the boat and oars
- >Give help wit matters of rowing rhythm
- >Use varying rates over short periods eg 16-22-18 etc

5. Problems In Team Coordination

Problems in team coordination are caused mostly by individual technical errors.

Possible Remedies

- >Help with rhythm
- >Compare video of the crew with very good crews
- >Rowing interspersed with breaks
- *Checkpoint 1 Directly after lifting the oars out of the water, the hands should still be drawn into the body
- *Checkpoint 2 When the hands are in front of the knees, the upper body leans slightly forward and the legs stretch
- >Rowing with the eyes closed
- >Varying the rating without major work in the water
- >Start rowing then let the oars trail in the water with no pressure
- >Rowing with fixed seat, then with body swing, then with 1/4, 1/2 slide
- >Rowing with one arm then the other
- >Row long stretches of water together
- >Train in rhythm, sliding forward and pulling in a set ratio
- >Rowing with square blade
- >Measure the boat at regular intervals
- >Let parts of the crew row together e.g. in fours and doubles
- >Vary exercises, do not allow monotony
- >Do not talk too much about technique. A few intensive endurance units are often enough to restore team coordination