

Types of Exercises and Means of Conditioning for Paddlers

Movement control		Prevention	Muscle Endurance/ Muscle Hypertrophy		Max strength / Explosive strength			Specific strength		
Fundamental movement skills Fundamental moves Posture Mobility	Joint stabilization exercises	Assistance exercises	Work Capacity ¹	General exercises	Core strength	Maximal strength	Power	Semi-specific strength	Specific strength	Special strength (on the water)
The goal is quality of the movement – motor control, posture, full ROM, rhythm, breathing patterns, and only lastly force					The main goal is appropriate force production – force(power), motor control and posture			Appropriate force in the correct movement patterns		
<p>Fundamental movement skills:</p> <ul style="list-style-type: none"> climbing jumping landing holding carrying pushing/pulling hanging gripping <p>Fundamental moves:</p> <ul style="list-style-type: none"> squat lounge pulls (horizontal, vertical variations) push (horizontal, vertical variations) rotations (thoracic, low back, hip variations) stances <p>Posture:</p> <ul style="list-style-type: none"> postural exercises breathing exercises <p>Mobility:</p> <ul style="list-style-type: none"> stretching exercises mobility exercises 	<p>Shoulder stabilization exercises</p> <p>Mainly the rotator cuff exercises using:</p> <ul style="list-style-type: none"> TRX exercises Rubber band exercises Body weight moves <p>Core stabilization exercises:</p> <ul style="list-style-type: none"> resisting transverse plane bending resisting frontal plane bending resisting sagittal plane bending resisting rotation combination of the above 4 <p>Trying to connect stabilization exercises with:</p> <ul style="list-style-type: none"> strength exercises balance exercises breathing exercises mobility exercises 	<p>Preventive exercises:</p> <ul style="list-style-type: none"> individual needs (athlete specific) compensatory exercises (keeping the body balanced – lower and upper limbs, left and right side, posterior and anterior chain, posture etc.) preventing typical discipline injuries (sprint, slalom, SUP, rowing specific) 	<p>A selection of exercises from categories:</p> <ul style="list-style-type: none"> Fundamental movement skills Fundamental moves General strength Core strength Maximal strength Power Semi-specific strength Specific strength Isoinertial exercises 	<p>General strength exercises examples:</p> <ul style="list-style-type: none"> Bench Press Bench Pull Dead lift Squat Lat pull down Military press Bent over row Upright row Seated cable row Chin up variations Olympic complexes KB exercises Calisthenics <p>THE OLYMPIC LIFTS:</p> <p>Snatch</p> <ul style="list-style-type: none"> snatch power snatch hang snatch hang power snatch snatch pull hang snatch pull 	<p>Core strength exercises examples:</p> <ul style="list-style-type: none"> Rollout 'Windshield wipers' Hang leg rises Weighted curls Olympic lifts Weighted back lifts Hip hinges Calisthenics <p>Clean and Jerk</p> <ul style="list-style-type: none"> clean and jerk power clean hang clean hang power clean clean pull hang clean pull 	<p>Max strength exercises examples:</p> <ul style="list-style-type: none"> Dead lift Bench Press Bench pull Military press Squat Olympic lifts Weighted chins 	<p>Power exercises examples:</p> <ul style="list-style-type: none"> Bench Press Bench Pull Squat Olympic lifts Throws Pliometry <p>Assistance exercises for OL:</p> <ul style="list-style-type: none"> straight arm squat press under high pull hip hinge dead lift RDL 	<p>Semi-specific strength exercises examples:</p> <ul style="list-style-type: none"> One arm cable row Bench Pull Chin ups One arm Dumbell row 	<p>Specific strength development examples:</p> <ul style="list-style-type: none"> Single Arm Machine³ <ul style="list-style-type: none"> stroke drills static strength at the 4 stroke phase points Ergometer⁴ - fixed and sliding one: <ul style="list-style-type: none"> one sided strokes drills continuous paddling sprints Isoinertial Kayak setup <ul style="list-style-type: none"> one sided strokes drills 	<p>Special strength (on the water):</p> <ul style="list-style-type: none"> hydro brake strength endurance power weight in the boat starts, speed ups low SR – max DPS specific situations <ul style="list-style-type: none"> shallow water front wind different equipment paddling into shore maximized DPS at certain SR one sided power strokes
<p>ISOINERTIAL TRAINING</p> <ul style="list-style-type: none"> Specific strength exercises (posture, movement pattern, joint stabilization, body inertia balancing, force production) General exercises (stabilization, posture, fundamental movement patterns, play with body inertia, concentric and eccentric load) 										



Notes about the table:

- From left to right the complexity of the movements increases. On the far left the exercises are the most basic and fundamental ones. Totally on the right the specific exercises turn into special strength exercises – the only ones executed in the boat.
- As the athlete evolves the emphasis from the left side exercises turns more and more to the exercises on the right side (the higher the level the more specific work an athlete needs).
- But anywhere in their career athletes need to take care of the whole span of the exercises (abilities). Even evolved athletes must take care of their posture, mobility and prevention exercises. In turn also intermediate athletes need to use some of the specific and special strength exercises to make sure the transfer from land conditioning to improved performance on water does happen.

¹ Work capacity is well described in this blog by Gray Cook: <http://graycook.com/?p=2214>

² By Single arm machine we mean such a setup or simpler: <http://www.kayakpro.com/catchforce/img/kayak-more-1.jpg>

³ A collection of exercises and methods to be used on the Single Arm Machine by coach Alexander Nikonorov: https://www.youtube.com/watch?v=Xk_wt3vkn1o

⁴ A simple guide to ergometer training: <https://www.youtube.com/watch?v=BQvniguiR-o>