Chapter 3
Basic Swimming Skills as Applied to Water Polo

Water polo can provide great physical and psychological cross-training benefits for swimmers and other athletes. A typical season lasts a little over three months, during which many mental and physical growth patterns can occur.

Pediatricians have found that overtraining and specialization on one activity or sport can have negative consequences for youth sports participants (American Academy of Pediatrics, p.156). The specific areas of concern are: physical – musculoskeletal injury and growth impairment, physiological – improper nutritional intake, and psychological – personality developments which may adversely affect the longevity of involvement in sports.

Great athletes in their early development typically participate in a variety of sports in order to learn various physical and mental skills and increase enjoyment in these activities. In addition, as stated in Chapter 2, different physiological systems are developed in water polo in comparison to many other sports.

The team aspect of water polo also adds a facet that is not found in individual sports. One can have a great individual performance but at the same time his/her team is not having success. Individual sacrifice for team success is an attribute that water polo shares with many other team sports.

To follow up on our chapter on swimming conditioning and water polo, we will look at the modifications in training that water polo players must do. Swimming strokes for water polo must be adapted in order to make sure that the players can:

- See where the ball is.
- See where his/her teammates and opponents are.
- See where (s)he is in the pool and where the goal is.
- See where the referee is pointing and what (s)he is indicating.
- Hear the referee’s whistle.
- Hear teammate communication and coaching instruction.

The adjustments that must be made from swimming technique to water polo technique for each of the competitive strokes are as follows:

**Head up Front Crawl – Sprint**
Front Crawl:

*Used as the mainstay for speed, strength, and lateral movements. Endurance, quickness, forward sprint, turning, and stop/start/transfer to eggbeater all part of this stroke and its variations.*

1. Head up high so that eyes, ears, and neck are above the water surface.
2. Entry point for hands outside the shoulders so as to increase stroke rate and add buoyancy and velocity to the body position and arm turnover.
3. Elbows riding high, above the forearm and shoulder to assist in protecting the ball.
4. Arm turnover rapid and choppy to enhance acceleration and allow for hands out of water to receive pass.
5. Flutter kick – short and explosive to add buoyancy to body position and inhibit defenders.

**Head up front crawl: short, choppy strokes**

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**Dribbling: wide strokes, head high**

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Joan Gould
www.waterpoloplanet.com

Matt Brown
http://mattbrownphoto.com
Head up back crawl (white caps)

Back Crawl:

*Used to get the best look at the field and to make direct eye and/or verbal contact with another field player or the goalie.*

1. Head up so that eyes, ears, and neck are above the water surface.
2. Body position “sitting down” so that head and upper torso out of water.
3. Entry point for hands outside the shoulders so as to increase stroke rate and add buoyancy and velocity to the body position and arm turnover. Straight arm entry just as in swimming technique.
4. Short, choppy and rapid strokes so as not to lose speed advantage in relation to other players.
5. Leg kick either cross frog and/or flutter depending on rate of speed desired and body height in relation to the water – the more body elevation desired, the more frog kick needed.

Head up back crawl (dark cap)
Dribbling: high elbows, head high, viewing the field

Body position – skull/breaststroke

Breaststroke:

*Used to slowly advance, rest, as part of preparatory body position for front crawl sprint, and transition to eggbeater kick used for all passing, shooting, offensive and defensive moves.*

1. Head up so that eyes, ears, and neck are above the water surface.
2. Shortened circle pulls so as to allow for immediate transition to other strokes.
3. Preparation of body position – prone to the water - for quick starts.
4. Short, circular and backward thrusts of frog kick to keep body level on water surface.
5. Preface to the eggbeater kick; most especially valuable and mandatory for goalies as their lower body support to block the ball. (see last page).
Skulling, resting, preparation of body position

Extended on side, ready for quick start (sidestroke)

Side stroke:

*Used primarily for change of direction; water polo requires 45°, 90° and 180° pivots and turns by the body; the trunk rotation to the side and use of the scissors kick helps drive these moves.*

1. Quick, short side pulls to the chest level only.
2. Hinging (flexion) of trunk and abdomen, timed with bent knee scissors kick for quick and explosive starting and change of direction.
Suggested swimming conditioning drills and their applicability to water polo:

<table>
<thead>
<tr>
<th>Drill</th>
<th>Energy System used</th>
<th>Area of Water Polo benefited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swimming sets with timed intervals – head down swimming – all four strokes for distances of 50, 75, 100, 200, 400 yds. depending on energy system development</td>
<td>Aerobic &amp; Anaerobic</td>
<td>Building aerobic base, increasing bodily recovery, developing VO(_2) maximum uptake, endurance.</td>
</tr>
<tr>
<td>Head up Reversals 180°, front crawl, change direction on whistle command</td>
<td>Anaerobic</td>
<td>Reaction time, mobility, flexibility, quickness, endurance, head up crawl capability.</td>
</tr>
<tr>
<td>Three strokes head up front crawl, three strokes head up back crawl, repeat pattern or on whistle command for 25+ yds.</td>
<td>Anaerobic</td>
<td>Technique for head up backstroke, mobility between front and back crawl, flexibility for prone and supine body positions.</td>
</tr>
<tr>
<td>Change of directions – 45°, 90°, 180° combinations as per pointed direction</td>
<td>Anaerobic</td>
<td>Reaction time, mobility, flexibility, quickness, endurance, head up crawl capability, ability to move in multiple directions.</td>
</tr>
<tr>
<td>Quick starts front crawl from head up prone body position, whistle command</td>
<td>Anaerobic</td>
<td>Beneficial body position for quickness, reaction time, rapid acceleration.</td>
</tr>
<tr>
<td>Head up butterfly short distances</td>
<td>Aerobic/Aerobic</td>
<td>Utilization of multiple muscle groups, rigorous exercise, endurance.</td>
</tr>
<tr>
<td>*On top swimming/underwater swimming – alternate short distances</td>
<td>Anaerobic, Anaerobic glycolic</td>
<td>Lung capacity, O(_2) deprivation, swimming efficiency.</td>
</tr>
</tbody>
</table>

* GREAT CAUTION – no hyperventilating during this conditioning so as to avoid the chance of shallow water blackout.
Suggested ball handling conditioning drills:

<table>
<thead>
<tr>
<th>Drill Description</th>
<th>Anaerobic, Anaerobic glycolic</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head up dribble reversals 180°, front crawl, change direction on whistle command</td>
<td>Anaerobic</td>
<td>Reaction time, mobility, flexibility, ball pick-up and movement, quickness, endurance, head up dribble capability.</td>
</tr>
<tr>
<td>Dribble with ball, pick up over head, fake three times, replace, dribble – repeat pattern</td>
<td>Anaerobic</td>
<td>Dribbling and ball pick up proficiency, faking motions effectiveness for shooting, eggbeater kick as support for body position.</td>
</tr>
<tr>
<td>Head up dribbling with defender contact – holding and resisting</td>
<td>Anaerobic, Anaerobic glycolic</td>
<td>Ball handling with physical contact, overcoming resistance and drag from defender, maintaining technique under duress.</td>
</tr>
<tr>
<td>Change of directions, dribbling – 45°, 90°, 180° combinations as per pointed direction</td>
<td>Anaerobic</td>
<td>Reaction time, mobility, flexibility, quickness, endurance, head up dribbling capability, ability to move in multiple directions with the ball.</td>
</tr>
<tr>
<td>Turn (spin) 90°, 180°, vertical position, in possession of the ball with defender guarding</td>
<td>Anaerobic, Anaerobic glycolic</td>
<td>Ball handling, contact with defender, and leverage with the ball, offensive tactic for advantage on defender with hips down.</td>
</tr>
<tr>
<td>Dribble, pick ball up, spin 360° clockwise or counterclockwise, set ball back down, continue</td>
<td>Anaerobic</td>
<td>Dribbling, ball pick-up, rotation of body resulting from leg strength, balance, ball control.</td>
</tr>
<tr>
<td>Walking with the ball clutched in hand as part of a dribble/crawl stroke</td>
<td>Anaerobic</td>
<td>Gripping the ball, dexterity, stroke mechanics with ball.</td>
</tr>
</tbody>
</table>
Suggested eggbeater conditioning drills – leg strength:

<table>
<thead>
<tr>
<th>Drill Description</th>
<th>Anaerobic</th>
<th>Energy System</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eggbeater 4 directions – forward, backward, sideways left, sideways right – multiple variations</strong></td>
<td>Anaerobic</td>
<td>Leg strength and eggbeater proficiency, body position as necessary for passing, shooting and goal tending.</td>
<td></td>
</tr>
<tr>
<td>Eggbeater pushing flutter kick: players paired, facing each other – eggbeater should “win”</td>
<td>Anaerobic</td>
<td>Leg strength; flutter kick and eggbeater proficiency, body position as necessary for passing, shooting and goal tending.</td>
<td></td>
</tr>
<tr>
<td>Lateral (sideway) lunges eggbeater with arms extended - on command - stationary</td>
<td>Anaerobic</td>
<td>Lateral mobility for effectiveness in offensive and defensive movements, leg strength, and goal tending technique.</td>
<td></td>
</tr>
<tr>
<td>Lateral lunges eggbeater with arms extended - intermittent combined with head up crawl</td>
<td>Anaerobic</td>
<td>Lateral mobility for effectiveness in offensive and defensive movements, transition from horizontal to vertical leg strength.</td>
<td></td>
</tr>
<tr>
<td>Leap frog over partner – eggbeater kick</td>
<td>Anaerobic</td>
<td>Leg strength, vertical power, physical contact, fun</td>
<td></td>
</tr>
<tr>
<td>Submersing of partner - hands on shoulders from behind: straight arm, bent arm, complete sink for decreasing amounts of time</td>
<td>Anaerobic, Glycolic</td>
<td>Leg strength, vertical power, physical contact, fun.</td>
<td></td>
</tr>
</tbody>
</table>

** Many varieties for this drill – hands in water, out of water, on head, extended, carrying resistance, weight belts, etc.
Arm up defense, eggbeater support

References


www.athens2004.com/ Aquatics: Water Polo