

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



Joan Gould
www.waterpoloplanet.com

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



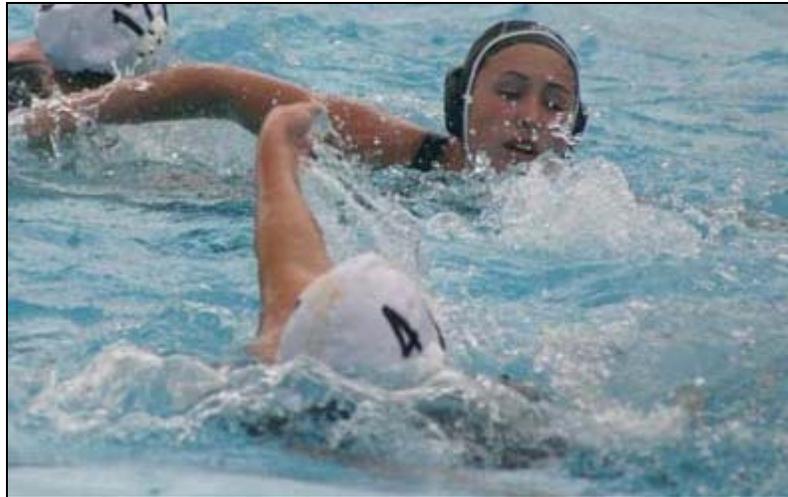
Joan Gould
www.waterpoloplanet.com

Dribbling: wide strokes, head high



Matt Brown
<http://mattbrownphoto.com>

Head up back crawl (white caps)



www.newzealandwaterpolo.com

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)



www.newzealandwaterpolo.com

Dribbling: high elbows, head high, viewing the field



www.sportsworld.photorelect.com

Body position – skull/breaststroke



Joan Gould
www.waterpoloplanet.com

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



Joan Gould
www.waterpoloplanet.com

Extended on side, ready for quick start (sidestroke)



Joan Gould
www.waterpoloplanet.com

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.

Turning with ball: defender guarding closely



Matt Brown
<http://mattbrownphoto.com>

Suggested swimming conditioning drills and their applicability to water polo:

Drill	Energy System used	Area of Water Polo benefited
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	Aerobic & Anaerobic	Building aerobic base, increasing bodily recovery, developing VO ₂ maximum uptake, endurance.
Head up Reversals 180°, front crawl, change direction on whistle command	Anaerobic	Reaction time, mobility, flexibility, quickness, endurance, head up crawl capability.
Three strokes head up front crawl, three strokes head up back crawl, repeat pattern or on whistle command for 25+ yds.	Anaerobic	Technique for head up backstroke, mobility between front and back crawl, flexibility for prone and supine body positions.
Change of directions – 45°, 90°, 180° combinations as per pointed direction	Anaerobic	Reaction time, mobility, flexibility, quickness, endurance, head up crawl capability, ability to move in multiple directions.
Quick starts front crawl from head up prone body position, whistle command	Anaerobic	Beneficial body position for quickness, reaction time, rapid acceleration.
Head up butterfly short distances	Aerobic/Anaerobic	Utilization of multiple muscle groups, rigorous exercise, endurance.
*On top swimming/underwater swimming – alternate short distances	Anaerobic, Anaerobic glycolic	Lung capacity, O ₂ deprivation, swimming efficiency.

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

Dribbling, defender guarding closely (dark caps)



Stanley Hu
Accelphoto.com



www.athens2004.com

Suggested ball handling conditioning drills:

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

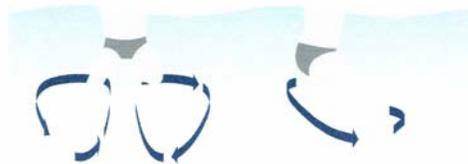
Water Polo

Technique

Players are not allowed to touch the bottom of the pool. They may use a rotary or "eggbeater" kick to keep themselves afloat so their arms are free for shooting, passing or catching the ball. This effort goes on while players are colliding and fighting for the ball.



The kick's lifting power comes from the sweeping action of the leg and foot.



The lower legs alternately rotate in large circular motions sideways and backward, and then sharply forward.

Suggested eggbeater conditioning drills – leg strength:

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

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

Arm up defense, eggbeater support



Joan Gould
www.waterpoloplanet.com

References

- Anderson, Steven J., M.D., et. al. "Intensive Training and Sports Specialization in Young Athletes." *Pediatrics* 106 (July 2000): 154-158.
- Lambert, Arthur and Robert Gaughran. The Technique of Water Polo. North Hollywood, CA.: Swimming World Publications, 1969.
- Los Angeles Times. "Athens 2004: Water Polo Technique." July 15, 2004, C4.
- Stockdale, John C. Water Polo Canada Coaching Certification Program Level 1 – Basic Coach. Ottawa, Can.: Coaching Association of Canada, 1977.
- www.athens2004.com/ Aquatics: Water Polo