

Nutrition for Water Polo Performance




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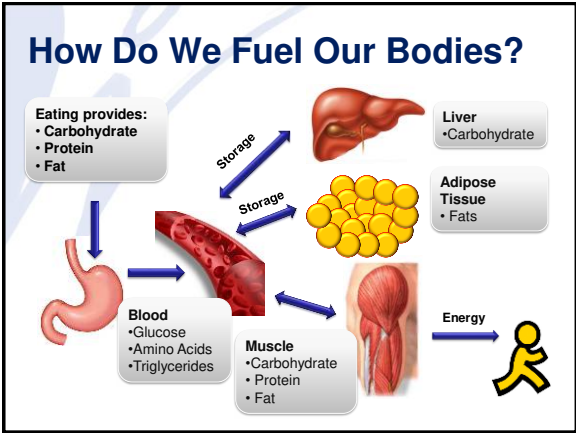
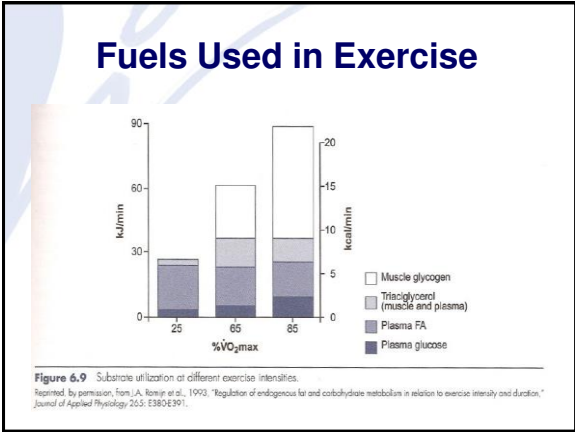
Nutrition for Water Polo Performance

- Nutritional needs for Water Polo
- Fuels used during exercise
- Training diet components
- Hydration
- Pre-training nutrition
- Recovery
- Daily fuelling for activity

- Dietary needs are individual
- Focus on what is right for you, not what others are doing


Water Polo- Nutritional Needs

- High intensity, intermittent activity pattern, coupled with aggressive physical contact
- Strength and power are important elements- nutrition strategies to promote muscle growth
- Data on Water Polo athletes demonstrate positional differences in performance physique
 - Center players are heavier and have higher body fat levels compared with perimeter players
 - Bouyancy and grappling v speed and agility



Where Does Energy Come From?

Fat	37 kJ/g
Alcohol	29 kJ/g
Protein	17 kJ/g
Carbohydrate	16 kJ/g



Carbohydrates

- Main energy source for high intensity exercise
- Boost immune system following intense exercise
- Intensity & duration influences how much is required
- Most important times to optimize intake are pre & post training / game
- Inadequate supply of blood glucose to the brain-mental and central nervous system fatigue
 - Impact on concentration and skill execution

Carbohydrate Foods- 'Nutrient Rich'

- Grain and rye bread
- Muesli, oats
- Pasta
- Rice
- Quinoa
- Fruit
- Sweet potato, corn
- Milk
- Yoghurt



Carbohydrate Foods- 'Energy Dense'

- Sugar
- Lollies
- Soft drinks
- Cordials
- Juice
- Sports Drinks
- Honey
- Jams
- Sports Gels



High Fat, High Carbohydrate Foods- 'Energy Dense'

- Pastries
- Crisps and Chips
- Chocolates
- Cakes
- Sweet biscuits
- Chocolate coated muesli & health bars
- Ice creams



Protein

- Building blocks for growth & development
- High satiety value
- Great sources of iron and **calcium**
- Not stored in the body
- Should feature regularly in daily meal plan
- Role of protein in sports performance
 - Repair muscle damage
 - Maintenance and growth of muscle

Protein Foods- 'Nutrient Rich'

- Dairy Foods – Milk, Yoghurt, Cheese
- Meat
- Chicken
- Fish – including tinned
- Eggs
- Legumes
- Tofu
- Whole grain cereal foods i.e. oats, quinoa



Fat

- Used as a fuel source during rest & submaximal intensity (aerobic), long duration exercise
- Plenty of stores
- Important to include moderate amounts
- Focus on a variety of different types of fats from plant & fish-based sources



Micronutrients

- Role in health & sports performance:
 - Energy metabolism
 - Muscle contraction
 - Immune function
 - Bone metabolism
- Eat a wide variety of colourful foods
- Add powerful antioxidants
 - Dark berries
 - Yellow & orange fruits & vegetables
 - Green leafy vegetables
 - Whole grain breads & cereals



High antioxidant foods



Importance of Fluids

- Dehydration results in an increase in body temperature & reduced ability to dissipate heat
- Excessive dehydration reduces physical & mental performance
- Common symptoms of dehydration include; headaches, nausea, dizziness, cramps
- Can monitor hydration through urine colour

Guidelines for Hydration

- Carry a water bottle & drink “mouthfuls” often throughout the day
- Have a drink with every meal
 - Include fluid with pre training / game meal or snack
- Keep fluids cold, particularly in warmer weather, warmer pools
- Fluid options during exercise
 - Water
 - Sports drink



Sports Drink

Appealing Flavour

- Encourages intake due to taste

Sodium = salt

- Helps hold onto fluid
- Maintain thirst drive

Dental Health

- Sugar and acidity
- Mouth dries out- environment to promote tooth decay
- Follow up with mouthful of water



Carbohydrate

- 6-8% carbohydrate
- Fuel source during exercise
- Empty kJ's if not required for fuelling

Indications for use

- During an intense training session, between gym & pool, during game / tournament

Pre-Training Nutrition Support

Key Considerations;

- Type of training session
- Time of the day
- Support key sessions with carbohydrate predominant foods / fluids
- Tolerance and timing is very individual
- Practice optimal nutrition support in training
- Organisation is essential

Nutrition Priming for Exercise

Activity	Requirement for Nutrition Support
Pool session	Yes
Weights session	Yes
Core / Pilates session	No
Lower intensity cardio session	Based on individual requirements
Afternoon / evening training session / game	Yes

Pre Exercise Suggestions

2-4 hours prior to exercise

Oats/natural muesli with milk/Greek yoghurt, berries
 Weet Bix, fruit, milk, Greek yoghurt
 Grain/fruit toast with spread + milk smoothie
 Pasta with lean protein & vegetables
 Whole grain sandwich/wrap with lean protein & salad
 Lean meat & vegetable stir fry + noodles/rice
 Sushi + 170g Chobani / YoPro yoghurt
 Liquid Meal Supplement i.e. Sustagen Sport



30-60 minutes prior to exercise

Fruit i.e. banana
 Toast / fruit toast with honey / peanut butter
 Rice cakes / crispbread + cheese
 Muesli / fruit bar
 Homemade muffin / ball
 Low fat yoghurt / rice pudding
 Low fat milk drink

Recovery

- **Key Considerations:**
 - Type of session completed
 - Physical demands of session / game
 - Timing of next key training session / game
 - Timing of next meal after session
 - Adequate fluids and temperature of fluids
 - Being organised

Not a 'one size fits all' approach

Recovery

4 R's of RECOVERY

1. **Refuel** = carbohydrate
2. **Repair** damaged muscles = protein
3. **Rehydrate** = fluid + electrolytes
4. **Revitalise** = variety of foods, including vitamins & minerals

Poor attention to nutrition recovery = compromised next performance

Recovery Options

- Chobani / YoPro yoghurt
- Up and Go Energize 2x protein
- Milk and yoghurt Smoothie
- Sustagen Sport on water / milk
- Rice cakes / crispbread (Premium or Vita Wheat) with tahini / hummus and cheese
- Wrap with chicken / ham / cheese / egg + spinach
- 125g four bean mix and tin flavoured tuna

Daily Fuelling for Activity

Poorly Timed Option

7:30am: Breakfast
 Oats made with water, honey, dash of milk
 Cup of tea / coffee

11:00am: Snack
 Banana bread
 Apple

1:00pm: Lunch
 Chicken and salad
 Apple
 Water

4:30pm: Snack
 Carman's protein bar
 2 chocolate biscuits

5:45-8:00pm: Gym and Pool session
 During - Water
 After session - Gatorade, peanut butter sandwich

8:30pm: Dinner
 Bolognese sauce
 2 cups of pasta
 2 slices garlic bread
 Glass of juice

Planned Option

7:30am: Breakfast
 Oats made with milk, berries, seeds/nuts, honey, Greek yoghurt on top
 Cup of tea / coffee

11:00am: Snack
 Chobani yoghurt pouch
 Mandarin

1:00pm: Lunch
 1-2 chicken, cheese and salad wholegrain wraps
 Apple
 Water

4:30pm: Snack
 Up and Go, banana, 2 rice cakes with peanut butter

5:45-8:00pm: Gym and Pool session
 During - Water, Sip Gatorade
 After session - Water

8:30pm: Dinner
 Bolognese sauce
 1 cup of pasta
 Side salad
 Glass of water

More Information

- Useful websites;
 - www.ausport.gov.au/ais/nutrition
 - www.sportsdietitians.com.au
- Individual Sports Nutrition Consult
 - Sportsmed SA, Stepney- Thursday & Friday afternoons ph. 8362 8111
 - PhysioXtra Marion- Wednesday afternoon / evening ph. 8357 4988
 - 10% off for Water Polo SA athletes
 - Private health rebates apply

Thank You

Questions?