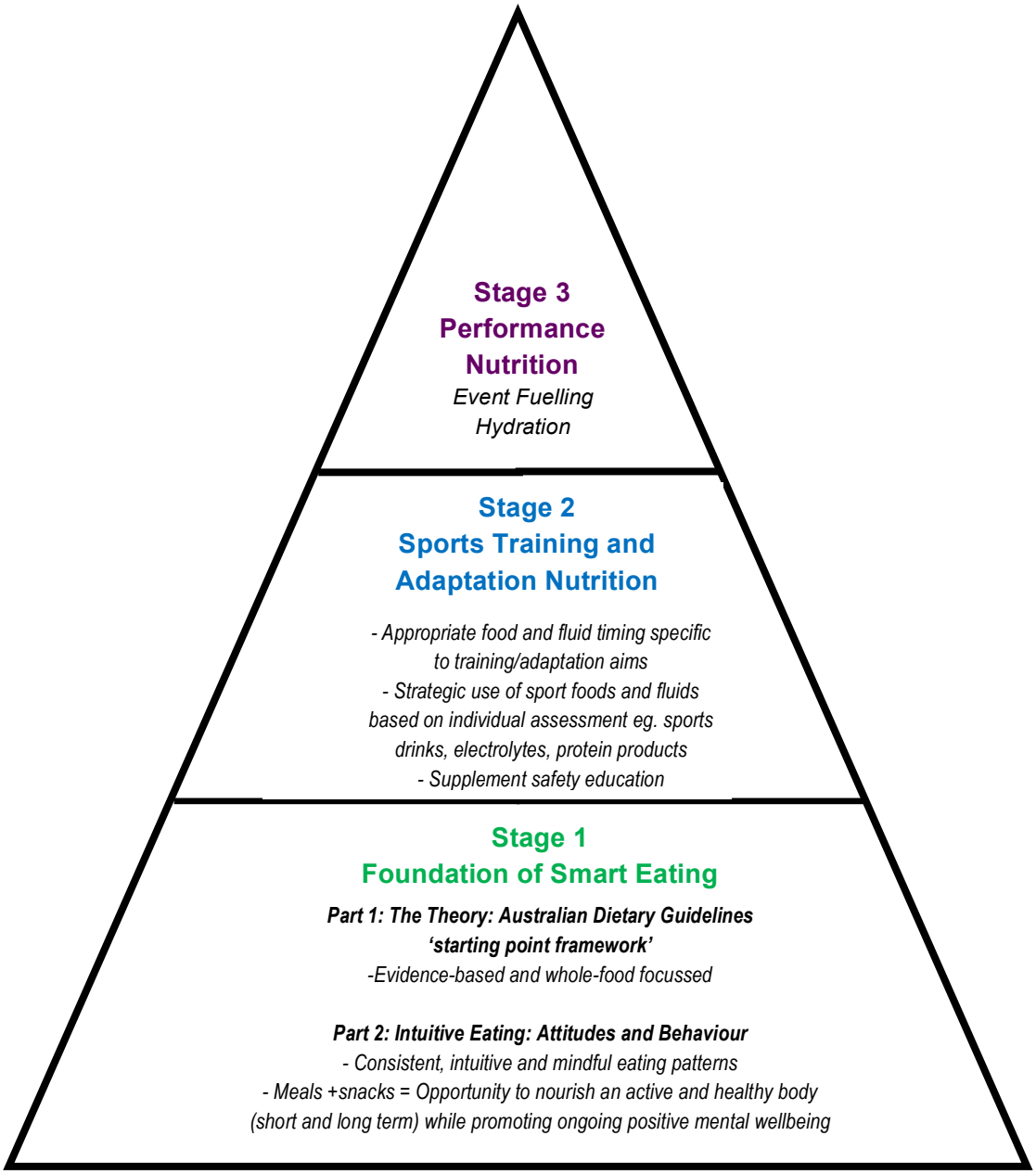
August 2015

Performance Nutrition Education Pathway



Off-season/Preseason Assessment
- Clinical (medical history)
- Body composition: weight, girths and skinfold
- Food Diary
- Personal eating values and beliefs

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ACCREDITED SPORTS DIETITIAN

Stage 1: Foundation Fuelling for the Swimmer – The Basics

Building a solid foundation of smart **real-food/whole-food** eating is crucial when it comes to helping our athletes reach their full growth, physical and fitness potential.

Only once this foundation is consolidated that additional sports nutrition strategies can be effective in helping our junior athletes achieve their full physical and sporting/performance maturity.

What is a 'balanced' and 'healthy' foundation training diet (eating pattern)?

There are four key factors that determine if an eating pattern is 'nutritionally adequate' and 'balanced' for fitness:

1. The everyday diet needs to be as consistent as possible. Each meal is an OPPORTUNITY to provide the correct fuel and 'building materials' the body needs to be fit and strong.
   Don't let these opportunities got to waste! Apply the "Rule of Three" at each core meal!
2. Includes **ALL five food groups** EACH day as each food group has a specific "job" in the body
3. Includes ENOUGH servings of EACH food group in EACH day
4. Includes an adequate amount of fluid EACH day

So what are the guidelines that incorporate these four important factors?

THE AUSTRALIAN DIETARY GUIDELINES – "a flexible STARTING POINT framework, not a prescription"
www.eatforhealth.gov.au

Food Group	Function in the body	Serves/day	Sample Serve
Breads/cereals/rice/pasta/ noodles	Premium brain, muscle and vital organ fuel	3-6	2 slices bread, ½ cup muesli, 1 cup of cereal, 1 cup cooked rice/pasta/noodles
Vegetables/legumes	Provides vitamins and antioxidants: "keys" to release energy and support recovery	5	1 Cup salad, ½ cup cooked , ½ cup baked beans
Fruit		2-3	1 medium piece (apple, banana, pear) 1 cup canned , ½ cup juice
Meat/fish/poultry/eggs/nuts/legumes	Muscle and hormone building blocks	1-3	65-100g meat/chicken, 2 eggs, 80-120g fish
Dairy	Calcium for bones and healthy muscle function	3-4	250ml cup milk, 200g yoghurt, 2 slices (45g) cheese

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STAGE 1: "Nutritionally Complete" Meal and snack ideas

Breakfast

- Wholegrain, high fibre cereal (eg. Weetbix or Sustain) with low fat milk and piece of fruit
- x2 pieces of wholgrain toast, 2 boiled/poached eggs with piece of fruit
- .5 -1 cup wholegrain muesli with low fat yoghurt and 4-5 fresh strawberries

Lunch

- 1-2 wholegrain/wholemeal sandwich or wrap with lean protein filling (chicken/beef/eggs/turkey/ham) and 3 colours of salad eg. baby spinach, tomato and grated carrot.
- Smoked salmon Wrap: 50-75g smoked salmon, 1tbs mashed avocado, 1-2 tsp light cream cheese and mixed salad (baby spinach, rocket, tomato, carrot, capsicum etc.)

Dinner

- Spaghetti bolognese : 1-2 cups cooked pasta with lean meat mince and 1.5 cup side serve of salad (aim for at least 3 different colours and/or varities. The darker the colour = more nutritious eg. Baby spinach and rocket vs. iceburg lettuce)
- "Meat and 3 Veg": 100g chicken/beef/lamb/Salmon with at least 1.5 cups of cooked veg (must include 3 colours/varieties at sitting eg. Broccoli, carrots, cauliflower) AND .5 cup-1 cup of starchy veg (potato/pumpkin/corn) or cooked rice/pasta/cous cous/quinoa (for tissue and organ fueling needs)

Snacks around training: Rich in 'building blocks' and brain and muscle fuel

Fresh fruit with a white bread ricotta and honey sandwich	Fruit canned in natural juice with wholegrain muesli bar and glass of low fat milk with milo
Low fat fruit yoghurt eg. Chobani with pikelet/crumpet with honey/jam/spread	Protein rich recovery smoothie (x1 fruit, 200g ow fat yoghurt and 200ml milk) and raisin toast
Fruit loaf eg. walnut and apricot loaf and dairy drink	Home made fruit muffins eg. banana, berry and Up and Go Energize

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Stage 2: Sports Training and Adaptation Nutrition

Specific timing and food/nutrient selections depending on training goals

'**Sports Nutrition'** is an umbrella term used to cover the many complex, evidence-based strategies used by Sports Dietitian-Nutritionists to enhance the specific physical and performance goals programed by your coaches and fitness/strength and condition staff. Within this integrated team, a Sports Dietitian-Nutritionist develops eating and snacking strategies aimed at periodising key nutrients to meet the intended training and overall fitness/body composition outcomes planned.

For example, the key nutrients (protein vs. carbohydrate and in what form they will be in for maximum benefit) required to support recovery post land training (weight-training) will be different from those needed to recover the energy used post a 'lactic', high intensity pool session.

The below outlines the two key Sports Nutrition concepts athletes need to consolidate to optimise their training quality and body composition. Remember- these are just the evidence-based 'rules'. You may be 'the exception'. Ultimately, **intuitive and mindful eating practices** will determine what your best-fit will be. Work closely with your 'food coach' Sports Dietitian to work out what is best for you.

Fighting Fatigue- Maximising daily carbohydrate needs for optimal energy and training quality ** See "Fighting Fatigue" Factsheet by SDA*

Nutrition science is constantly evolving as new discoveries are made every year. Carbohydrate research is no exception. Information that was considered 'cutting-edge' and 'best-practice' around the 2000 Sydney Olympics has since been refined and upgraded to make them markedly different in 2015.

Key Change: terminology/language around carbohydrates and their application to high performance training.
- OLD: 'High carb' vs. 'Low carb' diets - implies that one size fits all.
- **NEW**: 'Carbohydrate Availability' – Being flexible and periodising your carbohydrate to make it available when you need it the most ie. high intensity, explosive exercise sessions or in sessions longer than 90mins.

Take home messages

1. Daily carbohydrate intake needs to be as flexible as your training program. It is **not** a 'one-size-fits-all' approach
2. Scale your fuel (carbohydrate) appropriately based on your workload eg. rest day vs. high intensity day

* See SDA Fighting Fatigue factsheet for recommendations for differing loads

My flexible AND optimal fuelling range for swimming is

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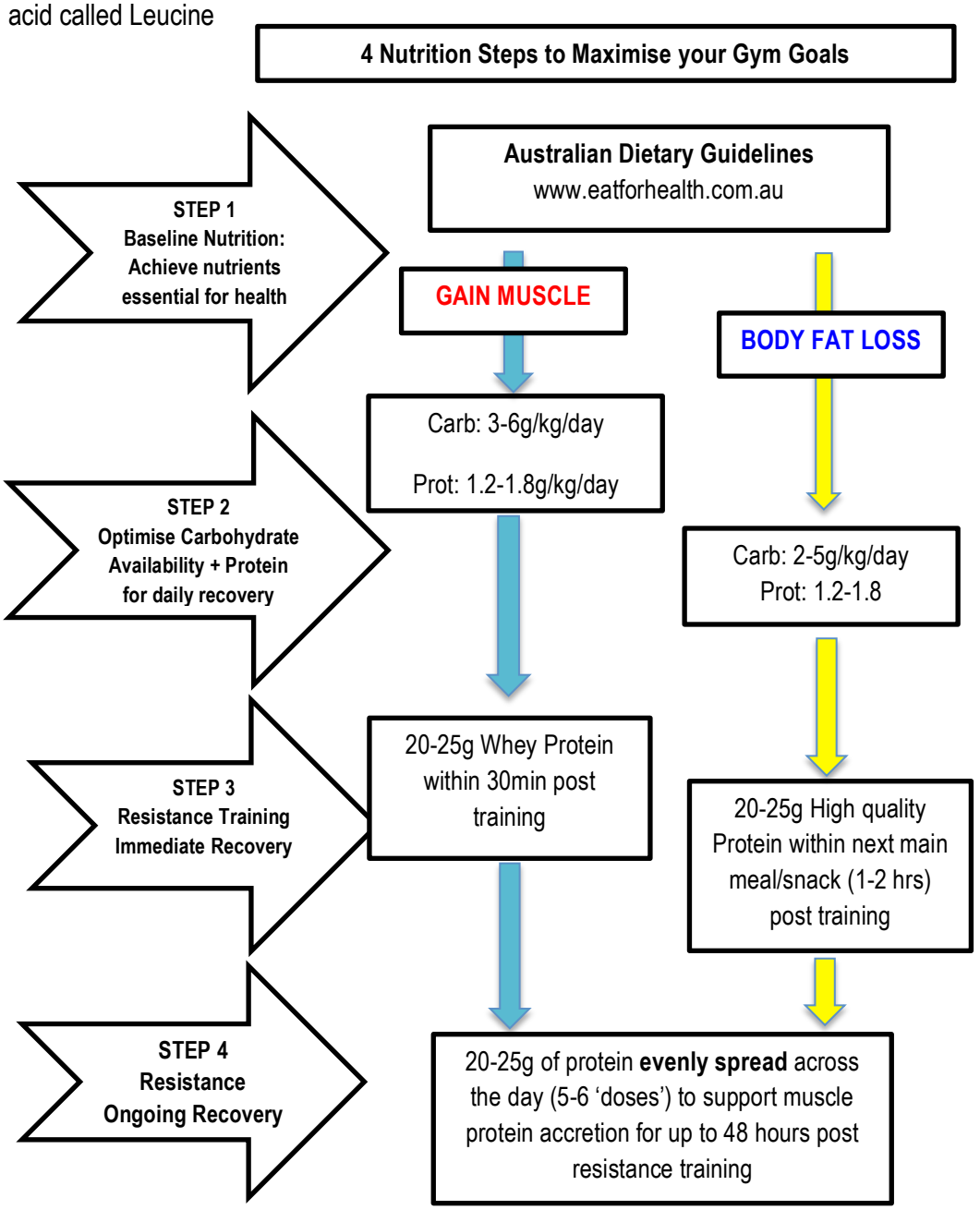
Optimising Body Composition-Optimal Protein Strategies "is more better?"

- Daily protein intakes of 1.4-1.5g/kg/day but no more than 2g/kg/day are recommended to maximise weight-training adaptations. Therefore more protein does NOT mean more muscle.
- Consume 20-25g protein post exercise to kick-start repair and stimulate continual building. The body is in an elevated state of repair/building for up to 48 hrs post weight training.
- Continue and equally space meals and snacks containing 20-25g protein throughout the day to support ongoing muscle recovery/building. Never forget to eat a basic nutritionally complete daily balanced diet first and foremost.
- Choose animal based proteins eg. Dairy whey protein is rich in a muscle-building 'trigger' amino acid called Leucine



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Sample Baseline Meal Plan – Low GI, Moderate Protein Approach

*Foundation Fueling must be achieved **before** supplementation is considered*

Breakfast	
Morning Tea	
Lunch	
Afternoon Tea	
Dinner Plate portioning: ½ Veg/salad ¼ Lean Protein ¼ Quality carb.	Example:
Supper/Before bed	

Nutrition Tips – Establishing Foundation Fueling

Each main meal must be NUTRITIONALLY COMPLETE: Eating = Training. Don't let your opportunities go to waste! Always remember the "rule of three" at each CORE meal below:

1. Quality Carbohydrate (more grainy= more nutritious = Low GI) – including starchy veg: potato, sweet potato, corn, pumpkin
2. Quality Protein. Must have come from an animal source (lean meats, eggs, Low fat dairy)
3. Must contain vitamins and antioxidants. (Fruit and veg)

- each sitting (at least Lunch and Dinner) must include 3 different colours/varieties
- deeper the colour = more nutritious

Snacks are opportunities to

A) Fill in nutritional gaps

B) Stave off hunger

For individual assessment and meal planning appointments, please contact www.sportsmedbiologic.com.au

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