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Fueling our Adolescent Athletes

Keri Strachan - registered dietitian



UNIQUE CHALLENGES:

- Often train > once a day
 - Exhaustive sessions i.e. 2 hours or more
 - Demands of adolescence growth and muscular development
- → HIGH NUTRITIONAL NEEDS



NUTRITIONAL GOALS:

- Training diet
- Competition diet
- FOOD FIRST approach
- Maintain ideal body composition
- Longevity and long-term health



BODY FAT % GOALS:

Description	Women	Men
Essential Fat	10-13%	2-5%
Athletes	14-20%	6-13%
Fitness	21-24%	14-17%
Average	25-31%	18-24%
Obese	32%+	25%+

BODY FAT % GOALS:

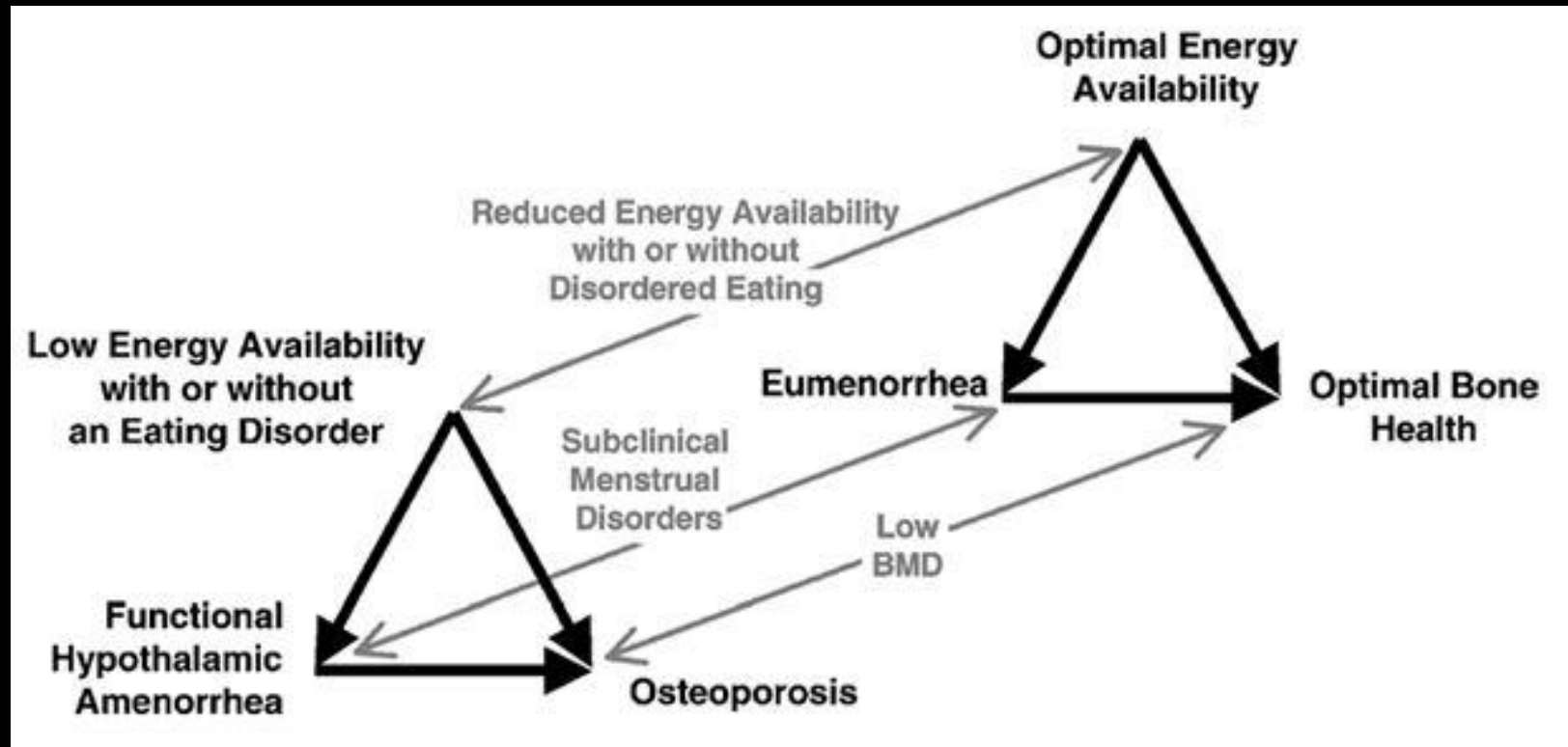
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BODY FAT % GOALS:

- Minimize the “dead weight”
- Endurance versus Sprint
- Female adolescence hormone changes
- Male adolescent battle to get enough in!
- Over-training syndrome
- Female Athlete Triad



FEMALE ATHLETE TRIAD:



TRAINING vs. COMPETITION:

- High training load
- Tapering pre-competition
- Competition days over 2-7 days
- Travel and jet lag



TRAINING DIET – carbohydrate needs:

- Adjust to match training load
- Replenish liver and muscle glycogen
- Optimal recovery
- Ensure training capacity next session



TRAINING DIET – carbohydrate needs:

- Choose low GI whole grain carbs
- Avoid highly refined, sugar-rich options
- Limit sugary drinks
- Monitor cravings and hunger







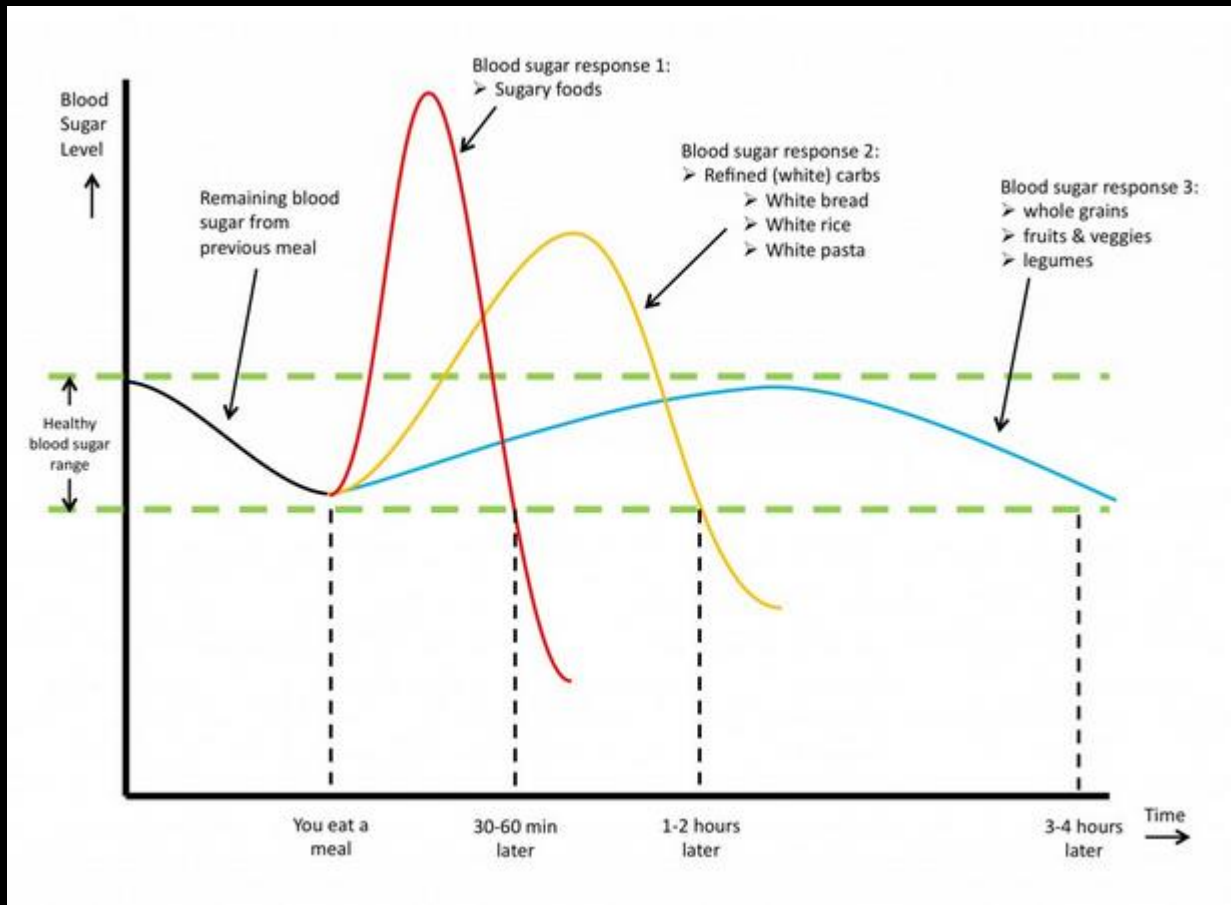
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TRAINING DIET – carbohydrate

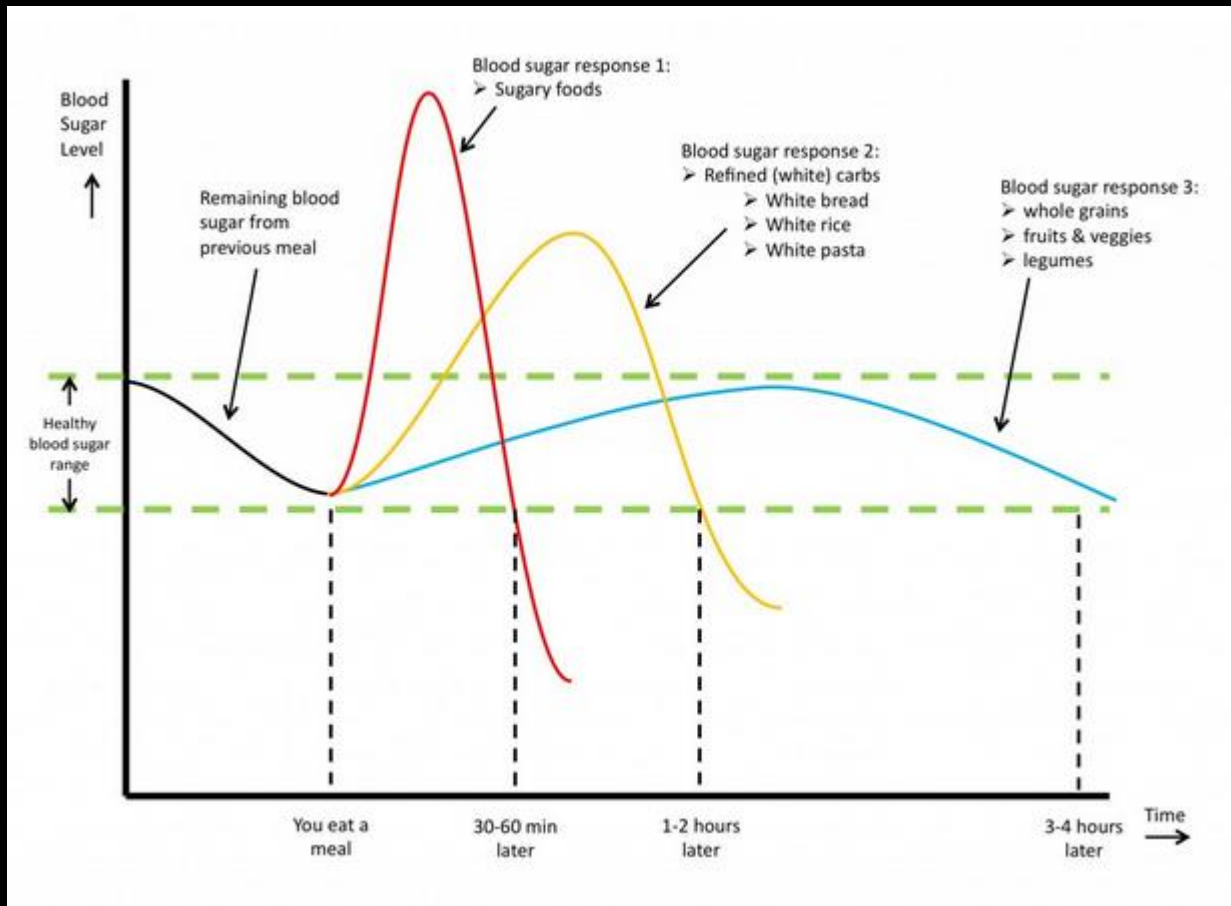


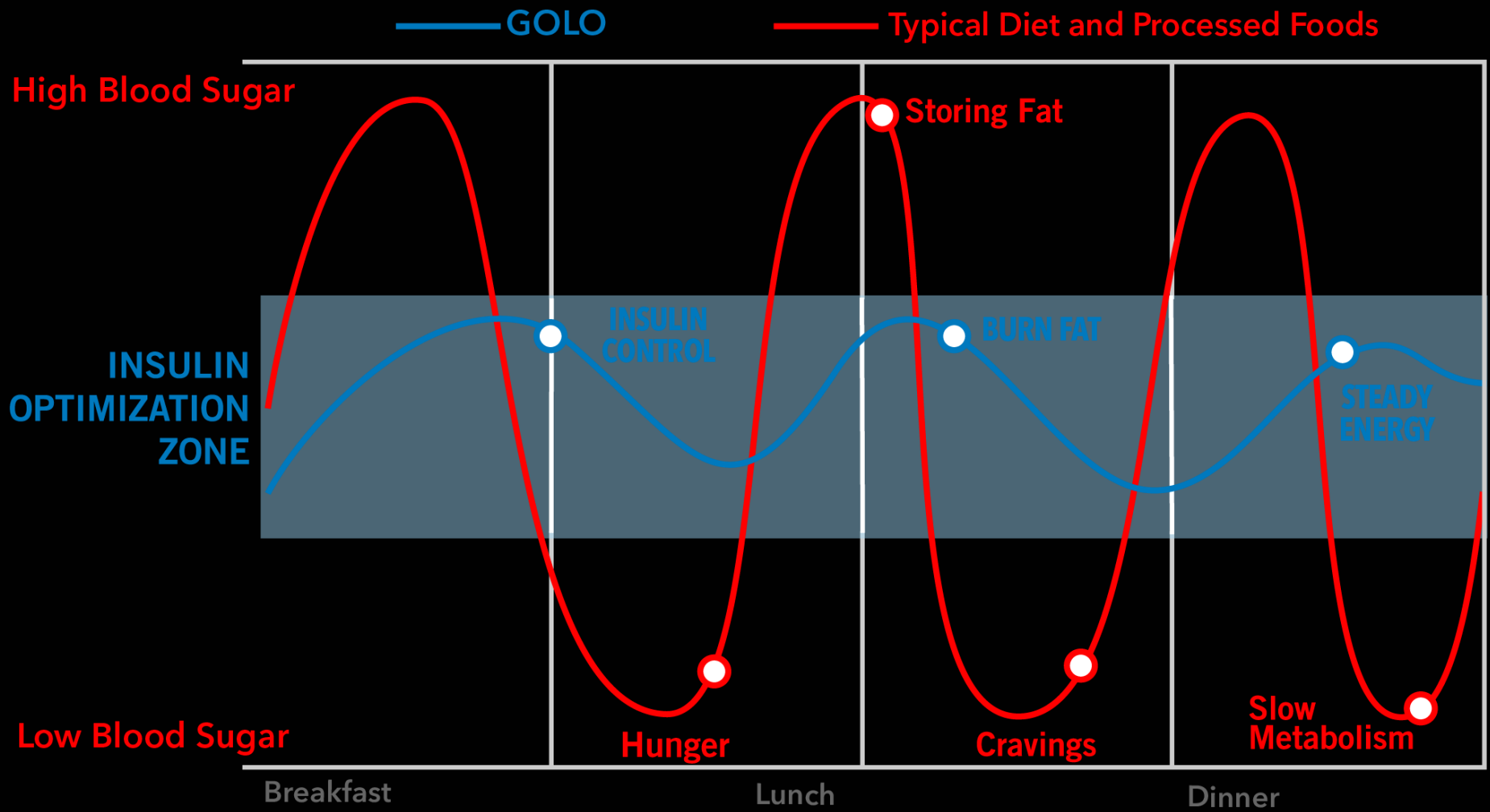
TRAINING DIET – carbohydrate needs:

- Traditionally 6-12g/ kg/ day
- OFTEN requires LOTS of refined carbs



TRAINING DIET – carbohydrate





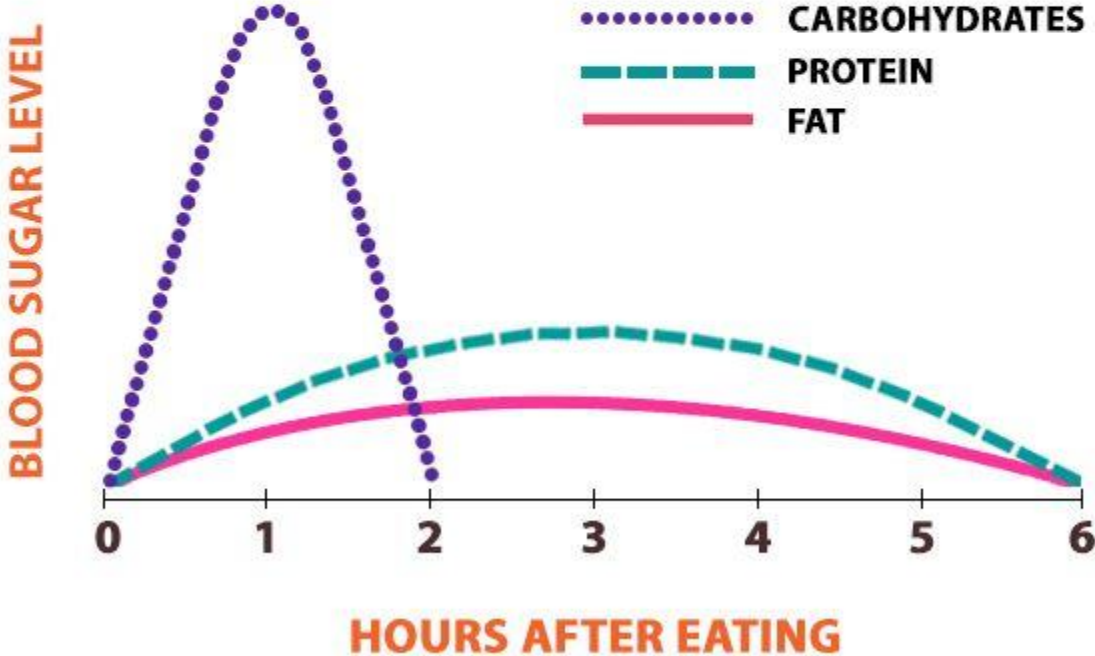
TRAINING DIET – dietary fat

- 9kcal / gram fat
- 4kcal / g carb or protein



BLOOD SUGAR

HOW DIFFERENT FOOD
TYPES AFFECT LEVELS



FATS AND THEIR BENEFITS



--> forms an important component of cell membranes and walls

--> helps the body use fat soluble vitamins - A, D, E and K.

--> provides insulation under skin



--> provides protection for internal organs
--> provides energy and means for energy storage



--> makes up a large part of the brain and the spinal cord

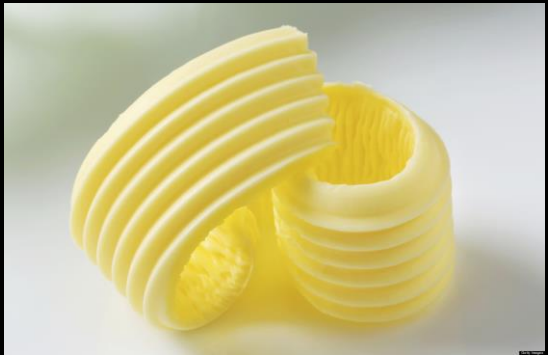
--> saturated fats, meat, eggs, dairy and coconut oil

--> monounsaturated fats, meat, olive oil, avocado

--> polyunsaturated fats, oily fish, sunflower oil.



- Olive oil, olives
- Nuts, seeds
- Avocado
- Coconut oil
- Butter, ghee
- Omega-3 fats



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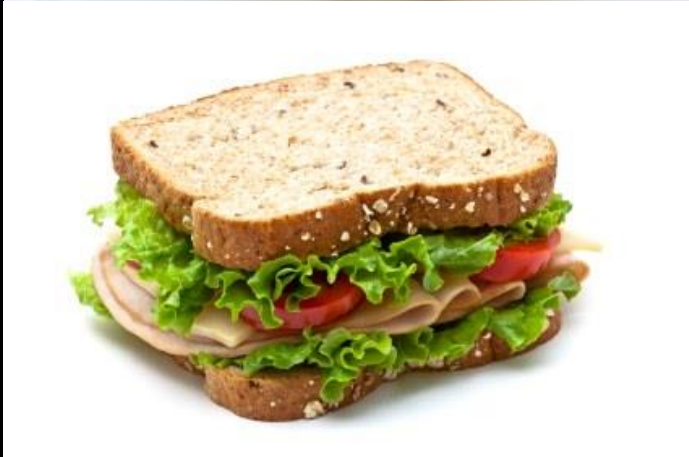
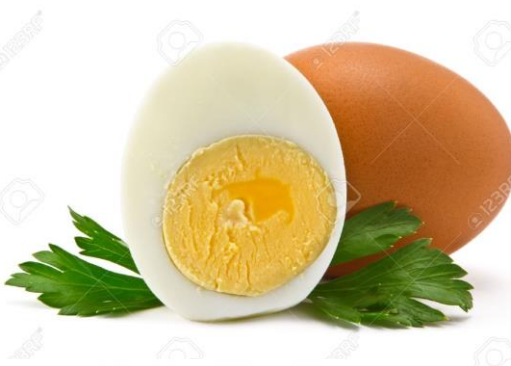
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PROTEIN REQUIREMENTS

Guidelines for maximum protein needs for different groups of athletes

Sedentary	0.8g per kg BM
General training program	1.0g per kg BM
Endurance athlete undertaking heavy training program	1.2–1.6g per kg BM
Endurance athlete undertaking extreme training program, competition or race	2.0g per kg BM
Strength athlete undertaking heavy training program	1.2–1.7g per kg BM
Adolescent athlete	2.0g per kg BM

ACHIEVING PROTEIN NEEDS:



PROTEIN CONSIDERATIONS:

- Timing
- Maximum 20g servings
- Recovery
- Protein shakes?
- Leucine (i.e. Whey)
- Protein foods =
nutritious in other ways



FLUID:

- intake during training often neglected
- take own sports drinks/ water
- Accessible
- Palatable
- Empty calories



COMPETITION DAY:

- drink plenty of fluids when competing in hot weather
- water versus sports drink
- Keep hydrated and maintain blood glucose levels



COMPETITION DAY:

- plan meals and snacks according to the time interval between events/ heats
- avoid hunger
- small easily digestible foods that empty quickly from the stomach



COMPETITION DAY:





RECOVERY:

- Will affect next day
- liquid or solid depending on time available
- loss of appetite
- poor choices at venue
- plan a good lunch

SUMMARY:

- adjust your diet with training load
- monitor body composition, performance, recovery
- control day to day food choices
- establish a structure that works for you
- if tempted to use a supplement seek professional advice

THANK-YOU!

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