

# Nutrition Presentation

Geelong Falcons 2012-2013



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# Why is Nutrition Important?

- Adolescence is the second largest growth spurt before reaching adulthood
- An increase in the quantity and quality of food is required during this time
- Nutrients obtained from food are needed for increased muscle and bone growth
  - *"If you eat 'junk' expect to have a 'junk' body and feel like 'junk'"*

# Ideal Body Composition



- Minimise losses in lean muscle mass
- Avoid increases in body fat
- Weight gain or loss indicates differences in energy balance

*"Energy balance is the difference between energy intake and energy expenditure"*

# Protein

- Approximately half the body's weight is made up of protein
- Proteins are made up of amino acids
- There are two main groups of amino acids:
- **Non-essential amino acids** - those that can be made by the human body
- **Essential amino acids** - those that can only be supplied by food

# Protein

## COMPLETE PROTEINS

Contain all of the essential amino acids

eg. animal products

## INCOMPLETE PROTEINS

Usually lack at least one amino acid

eg. plant products, grains, nuts & seeds

- Vegetarians can combine incomplete proteins to provide all amino acids

# Why is protein important?

- Essential nutrient in the diet
- In the body the amino acids are required to make:
  - muscle and brain cells
  - skin
  - hormones
  - repair damaged tissues
- **Recommended dietary intake (RDI) is about 65g/day for males aged 14-18 years**

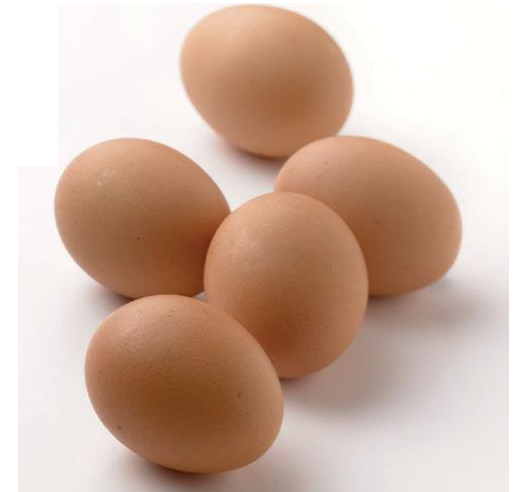
# PROTEIN

## Food Sources

- Beef
- Lamb
- Pork
- Chicken
- Fish
- Eggs
- Dairy products – cheese, yoghurt, milk
- Nuts & Seeds– almonds, pumpkin seeds,
- Beans and lentils – chickpeas, kidney beans
- Soy products – tofu, soy milk, tempeh
- Grains – brown rice, quinoa, buckwheat, millet

# PROTEIN

## Food Sources



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# Fats

- Healthy fats are an important part of a balanced diet
- Healthy fats include: **mono-unsaturated** (olive oil, avocado, almonds and hazelnuts) and **polyunsaturated** (salmon, walnuts, brazil nuts)
- Avoid 'saturated fats' found in fatty meat, cream, deep fried foods, cakes, biscuits and pastries
- High saturated fats can lead to high cholesterol and increase the risk of developing cardiovascular disease
- Omega 3 fatty acids, found in salmon, herring and mackerel are essential for optimal health.

# HEALTHY FATS

## Food Sources



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# Carbohydrate

- The body's primary source of dietary energy
- The body stores carbohydrate as glycogen in the muscles and liver
- As you exercise your muscles use the stored glycogen
- Carbohydrate stores must be replaced between exercise sessions by consuming carbohydrate foods
- Inadequate intake can lead to fatigue and poor athletic performance
- Eat more nutrient rich carbohydrate foods that are unrefined or unprocessed including whole grains and fruit
- Avoid nutrient poor carbohydrates that are refined and highly processed. This includes lollies, energy drinks and soft drinks
- High fat carbohydrate foods like cakes, chips, pastries and chocolate should be avoided also

# CARBOHYDRATE

## Food Sources

- **Whole grains:** Brown rice, Quinoa, Buckwheat, Rolled oats, Whole grain breads, Whole wheat pasta
- **Vegetables:** Broccoli, Carrots, Pumpkin, Sweet potato, Corn, Zucchini, Potatoes, Asparagus
- **Fruits:** Bananas, Oranges, Apples, Strawberries, Blueberries, Watermelon, Cantaloupe, Mangoes

# CARBOHYDRATE Food Sources



# Calcium

- Increased requirement during adolescent growth and training
- Needed for increased bone growth and strength
- Recommended four serves per day for adolescent athletes
- For example: one glass (250mL) of milk, one tub (200g) of yoghurt, or two slices (40g) cheese
- Non-dairy food sources of calcium include: broccoli, sesame seeds, spinach, and fish



# CALCIUM

## Food Sources



# Iron

- Transports oxygen in red blood cells, to the muscles and helps release energy from the cells
- Higher training demands lead to an increase in red blood cell production, fuelling the need for iron
- Foods containing iron include: lean meat, chicken, seafood, legumes and green leafy vegetables
- Combine these foods with Vitamin C rich foods to increase absorption
- Iron deficiency will result in poor energy levels and fatigue



# IRON

## Food Sources



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# Hydration

- **One of the most important nutritional priorities**
- Fluids lost through sweat can lead to dehydration
- For low intensity, short duration exercise, water is excellent
- For high intensity, endurance exercise longer than 60 minutes, electrolyte sports drinks and water
- Sports drinks contain carbohydrates to help with fatigue which provide glucose to the muscles and electrolytes to replace sodium, magnesium and other electrolytes lost in sweat
- Keep in mind most sports drinks are very high in refined sugars

# Daily Eating Guide

## BREAKFAST

3 egg omelette with leafy greens on wholegrain toast with avocado  
1 cup of homemade muesli with raw nuts/seeds, low fat natural yoghurt and sliced banana  
1 glass of freshly squeezed fruit or vegetable juice

## SNACK

1 apple  
1 homemade fruit and nut muffin

## LUNCH

2 wholegrain wraps with chicken, avocado, tomato, lots of salad and cottage cheese  
1 homemade fruit and nut bar

## SNACK

Small handful of raw nuts/seeds  
1 pear

## DINNER

1 piece lean eye fillet steak  
1 cup of broccoli/cauliflower  
10 green beans  
1 medium potato  
½ cup sliced carrot  
  
1 serving of 'Homemade' Apple crumble  
¼ cup of natural yoghurt

**WATER INTAKE** 2-3 litres throughout the day

# In Summary

- Adopt the right eating habits now – your food choices are in your hands!
- Drink 2-3 litres of water a day
- Include good quality protein throughout the day
- Eat plenty of whole grain carbohydrates
- Eat a wide variety of fresh vegetables
- Include fresh fruit daily
- Avoid saturated fats
- Include healthy fats daily
- Remember to keep hydrated during training
- YOU REALLY ARE WHAT YOU EAT!



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**BARWON HEADS RESORT**

— AT 13TH BEACH —