



# HIGH PERFORMANCE NUTRITION FOR NETBALL

# ***OVERVIEW***

1. Nutrition foundations

2. Pre-training/game day

3. Recovery

4. Hydration

5. Female specific nutrition

# Australian Guide to Healthy Eating

Enjoy a wide variety of nutritious foods from these five food groups every day. Drink plenty of water.



## BACK TO BASICS

### HOW MANY SERVES?

Vegetables - 5 serves

Fruit - 2 serves

Grains - 6 serves

Meat/alternatives - 2.5 serves

Dairy/alternatives - 2.5

More info at: <https://www.eatforhealth.gov.au>

# GRAINS

CARBOHYDRATE FOODS PROVIDE:

- ENERGY
- FIBRE - GUT HEALTH
- ESSENTIAL VITAMINS & MINERALS



# MEAT & ALTERNATIVES

PROTEIN FOODS:

- BUILD & REPAIR MUSCLE
- PROVIDE US WITH:
  - IRON
  - HEALTHY FATS (FISH)
  - ZINC
  - B12



# FRUIT & VEGETABLES



## FRUITS & VEGGES PROVIDE:

- FIBRE
- VITAMINS & MINERALS
- WATER
- CARBOHYDRATES (FRUITS+ SOME VEG)

# MILK & ALTERNATIVES

## DAIRY FOODS PROVIDE:

- PROTEIN
- CARBOHYDRATES
- CALCIUM
  - FOR BONE HEALTH
- OTHER ESSENTIAL VITAMINS & MINERALS  
E.G. VITAMIN A, D, B12,  
ZINC



# PRE-TRAINING & GAME DAY NUTRITION

## NUTRITION TIMING

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- TIMING OF FOODS PRE-TRAINING & GAMES IS IMPORTANT TO MAXIMISE SLOW-RELEASE ENERGY AND PREVENT BLOATING/LETHARGY.
- 2-4 HOURS BEFORE TRAINING/GAME: FOCUS= COMPLEX CARBOHYDRATES TO FUEL YOUR SESSION!
- <1 HOUR BEFORE TRAINING: TOP UP WITH FAST BURNING CARBOHYDRATES



# COMPLEX CARBOHYDRATES

## EXAMPLES:

- WHOLEGRAIN BREAD
- WHOLEGRAIN PASTA
- OATS
- **DAIRY FOODS**
- BROWN RICE
- BARLEY
- ANCIENT GRAINS  E.G. QUINOA
- SWEET POTATO
- CORN
- BEANS/LEGUMES





# MEAL EXAMPLES



**BREAKFAST**



**LUNCH**



**DINNER**



# TIMING OF CARBOHYDRATES

## WHEN TO USE COMPLEX CARBS

- Every day for good health
- 2-4 hours pre-training/games
- Post training/games to replenish lost stores in muscle



## WHEN TO USE SIMPLE CARBS:

- <1-2 hours before training/games
- During training/games hungry or fatigued
- Between sessions if <4 hours

# POST-TRAINING/GAME

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*Remember the* **3** *R's*

1. REPAIR - muscles with protein

**2. REPLENISH - with Carbohydrates**

3. REHYDRATE - replace water/sweat lost



**REPAIR**

*WITH PROTEIN*

**3 R'S**



**REPLENISH**

*WITH CARBOHYDRATES*



**REHYDRATE**

*WITH FLUID*



# ELITE RECOVERY SNACK



# RECOVERY MEAL

## FOCUS: Balanced Meal

- Lean protein
- Carbohydrates



# HYDRATION

## ***WHY IS IT IMPORTANT?***

### DEHYDRATION:

1. INCREASES FATIGUE
2. IMPAIRS DECISION-MAKING
3. MAY INCREASE RISK OF MUSCLE CRAMPING



"SUFFICIENT FLUID SHOULD BE CONSUMED DURING EXERCISE TO LIMIT DEHYDRATION TO LESS THAN ABOUT 2% OF BODY MASS" - IOC

## ***WHAT DOES THAT MEAN?***

**70KG PLAYER = 1.4KG LOSS**



# ACHIEVING ADEQUATE HYDRATION



1. ENSURE YOU ARE HYDRATED BEFORE YOU ARRIVE TO NETBALL
2. CHECK:
  - THIRST - BODY'S INTERNAL HYDRATION SENSOR
  - URINE - AIM FOR PALE STRAW
  - WATER AND SALT INTAKE
3. DRINK A MIXTURE OF WATER AND SPORTS DRINKS DURING THE GAME.

"WE DO NOT LOSE PLAIN WATER WHEN WE SWEAT AND PLAIN WATER ALONE WILL NOT ALLOW US TO RECOVER EFFECTIVELY."

-S. M. SHIRREFFS

REPLENISH **1.5L OF FLUID FOR EVERY 1KG LOST**

- ACHIEVE THIS THROUGH A MIXTURE OF WATER, SPORTS DRINKS, AND FOOD.

# FEMALE SPECIFIC NUTRITION CONSIDERATIONS IRON REQUIREMENTS

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*ATHLETES OFTEN HAVE AN INCREASED  
REQUIREMENT FOR IRON*

- *PERSPIRATION (2.5MG LOSS/LITRE SWEAT)*
- *FOOT STRIKE CAPILLARY DAMAGE*
- *BLOOD LOSS - MENSTRUATION, INJURY*
- *INADEQUATE INTAKE*
- *<sup>1</sup>HEALTHY<sup>1</sup> EATING*
- *VEGETARIANS*



*HOW DO YOU KNOW IF YOUR IRON IS LOW?*

# IRON ABSORPTION

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- *HAEM IRON (FROM MEAT, SEAFOOD, POULTRY) IS WELL ABSORBED (>20%)*
- *NON-HAEM IRON (PLANT SOURCES) IS POORLY ABSORBED (5-10%)*

*THE AMOUNT OF NON-HAEM IRON ABSORBED IS INFLUENCED BY A NUMBER OF OTHER DIETARY FACTORS  
E.G. VITAMIN C*



## SOURCES OF HAEM IRON

- *LAMB LIVER 11MG/1DDG*
- *OYSTERS 3.5MG/100G*
- *BEEF 4MG/100G*
- *LAMB 3MG/1DDG*
- *CHICKEN 1MG/1DDG*
- *TINNED TUNA 1.1MG/1DDG*
- *FISH 0.6MG/100G*



## SOURCES OF NON-HAEM IRON

- *PISTACHIOS 13MG/100G*
- *FORTIFIED CEREAL 10MG/100G*
- *CASHEWS 5.0MG/100G*
- *DRIED APRICOTS 4.4MG/700G*
- *WHOLEMEAL BREAD 4MG/100G*
- *LENTILS 3.2MG/100G*
- *SPINACH 3.2MG/100G*
- *BEANS 2.5MG/100G*
- *BROCCOLI 1.0MG/100G*
- *EGG - ONE LARGE 0.7MG*



# CALCIUM REQUIREMENTS

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- *IMPORTANT FOR BONE HEALTH*
  - *ALONG WITH VITAMIN D AND REGULAR MENSTRUAL CYCLE*
- *REQUIREMENTS: X3-4 SERVES PER DAY*
- *BEST SOURCE IS DAIRY FOODS*
- *NON-DAIRY FOOD SOURCES*
  - *FORTIFIED MILKS, CEREALS, TOFU*
    - *CHECK IF CONTAINS CALCIUM*
  - *CANNED SALMON/SARDINES, NUTS, GREEN VEGETABLES*

*\*CALCIUM ESPECIALLY IMPORTANT IF IRREGULAR MENSTRUAL CYCLE OR HISTORY OF STRESS FRACTURES\**

# S U M M A R Y

- AUSTRALIAN GUIDE TO HEALTHY EATING - 5 FOOD GROUPS
- PRE TRAINING/GAME NUTRITION:
  - COMPLEX OR SLOW BURNING CARBOHYDRATES - 2-4 HRS BEFORE
  - SIMPLE OR FAST BURNING CARBOHYDRATES - -1 HR BEFORE
- 3 R'S FOR RECOVERY:
  - REPAIR - WITH PROTEIN
  - REPLENISH - CARBOHYDRATES
  - REHYDRATE - WATER+ SODIUM LOSSES
- HYDRATION - 2% LOSS OF TBW = SIGNIFICANT REDUCTION IN PERFORMANCE
- PREVENT DEHYDRATION - BE AWARE OF:
  - THIRST
  - URINE COLOUR
- IRON REQUIREMENTS - CONSIDER ABSORPTION:
  - HAEM VS NON-HAEM SOURCES
  - VITAMIN C
- CALCIUM REQUIREMENTS:
  - SOURCES OF CALCIUM - E.G. DAIRY+ FORTIFIED FOODS
  - IMPORTANT FOR BONE & MENSTRUAL HEALTH