

FUELSTOP

PUT THE BEST IN TO GET THE BEST OUT










NUTRITION FOR SWIMMING



“PUT THE BEST IN TO GET THE BEST OUT”

The following booklet covers the general principles of nutrition that will best support swimming performance.

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FUEL STOP

PUT THE BEST IN TO GET THE BEST OUT

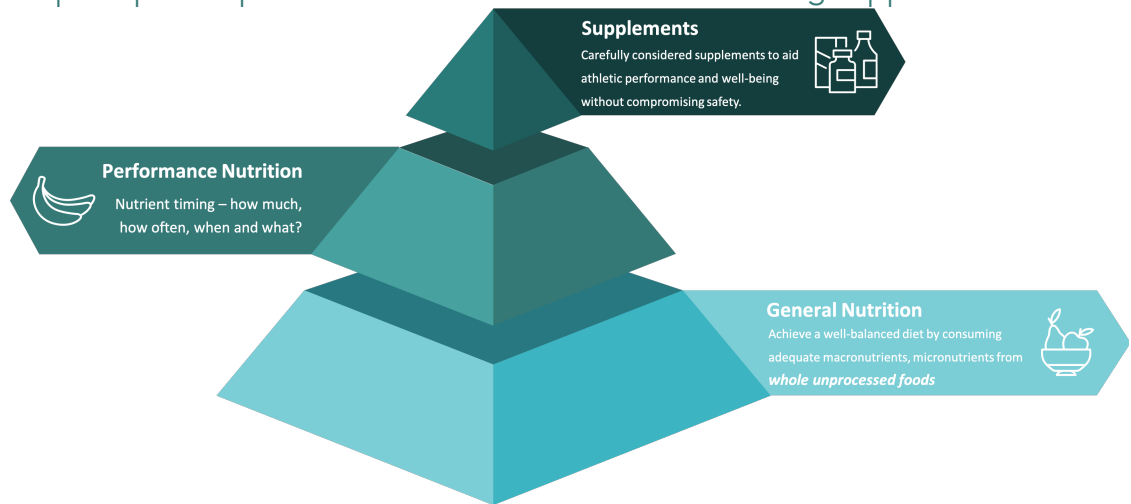


FOOD QUALITY



Addressing food quality is the number one way to see improvements in health, body composition and performance.

When addressing your diet you must begin by targeting your general nutrition this includes day-to-day food behaviors and selections. Once the foundation of your diet is improved you can then apply principles of performance nutrition before considering supplements.



To perform optimally aim to include ideal carbohydrate, protein, fat, vitamins & minerals in your diet to facilitate the high demand of your sport.



FOOD QUALITY

AVOID PROCESSED FOODS

BECAUSE



THEY WILL LEAD TO INCREASED FAT MASS

THEY CONTAIN HIGH AMOUNTS OF TRANS/PROCESSED SUGARS

WILL LEAD TO A PRO-INFLAMMATORY RESPONSE

CAN LEAD TO DECREASED HEART HEALTH

THEY CONTAIN ARTIFICIAL INGREDIENTS

HIGH IN CALORIES AND LOW IN NUTRIENTS



Replacing highly processed foods with their whole food alternatives significantly increases nutrient density which has major implications for all metabolic functions.

FOOD QUALITY

Below we compare two diets that have equal calories, carbohydrate, protein and fats. It shows the difference in vitamin and mineral content between a diet high in processed foods versus one high in whole foods.
Food quality is more important than counting calories/macronutrients.



The BAD
Breakfast
McDonalds McMuffin, Hash Brown, Medium Coca-Cola

Lunch
Convenience Store Meal Deal - White Bread Chicken Sandwich, Packet of Crisps and a Fanta

Dinner
4x KFC Chicken Wings, French Fries, Mayo Dip and a Medium Coca-Cola

The GOOD

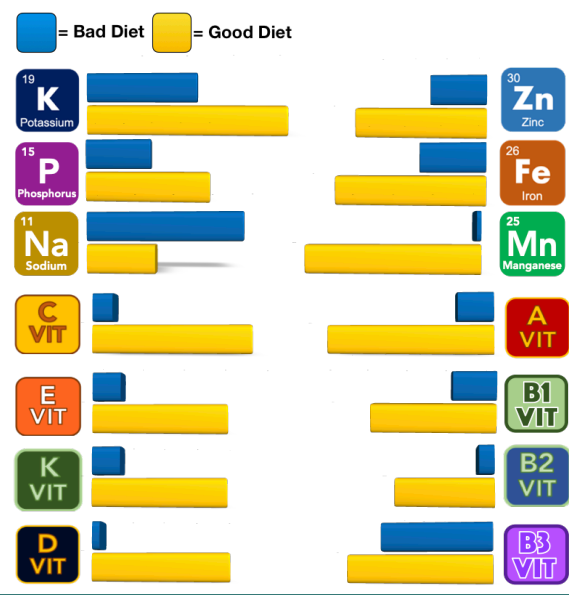
Meal 1 4 Egg Omelette on Rye Bread served with Bircher muesli topped with Banana and Berries

Meal 2 Seasoned Chicken Breast and Brown Rice served with Broccoli, Greens Beans, Cherry Tomatoes and half an Avocado

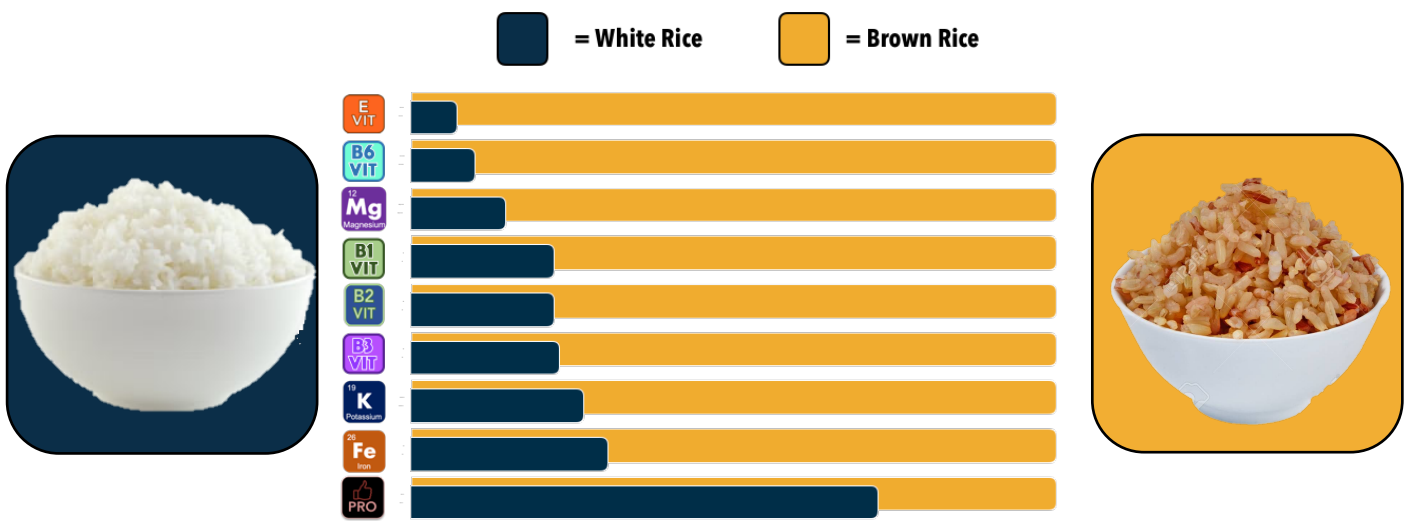
Meal 3 Sweet Chilli Salmon Fillet and Whole Wheat Pesto Pasta served with Mixed Leaf side Salad

Meal 4 Chilli Con Carne and Brown Rice

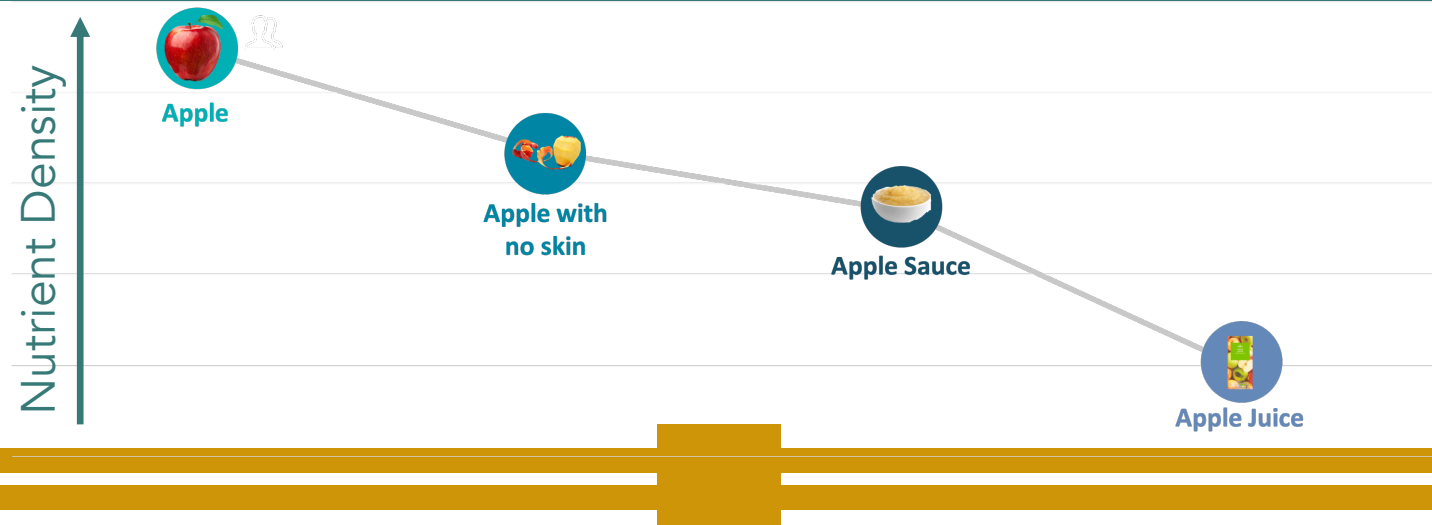
Meal 5 0% Fat Greek Yoghurt Topped with Mixed Nuts and Dried Berries



White rice (processed food) vs. Brown rice (whole food)



This reduction of nutrients is due to processing. Processing of food reduces the nutrient density and increases calories.



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CARBOHYDRATES

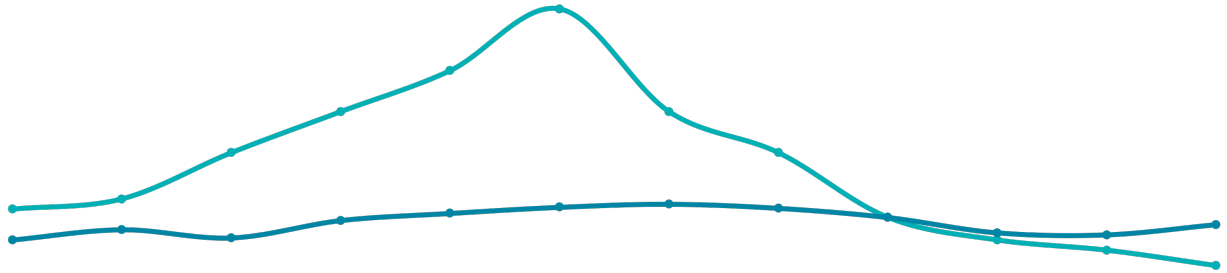


Carbohydrates are the main fuel source for exercise, the immune system, brain function and nervous system.

To fuel exercise and our body, consume the ideal carbohydrate selections to improve the nutrient density of your diet.

Carbohydrate quality can influence body composition, performance and health.

Blood Insulin



High GI CARBS

Processed carbohydrates lead to a fast release of glucose and insulin leading to greater fat storage and reduced nutrient density.



Low GI CARBS

Whole unprocessed carbohydrates release glucose and insulin at a slower rate keeping you fuller for longer and provide significantly more vitamins and minerals.

Below are the ideal carbohydrate selections

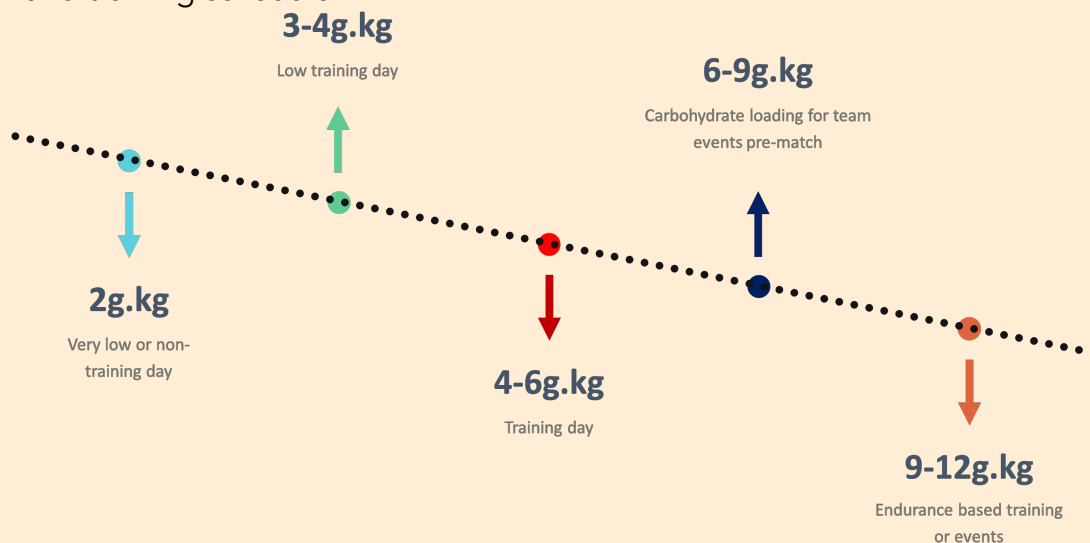


Improving your bodies ability to store carbohydrates has vast benefits for body composition and performance.

Follow the **Strategic Carbohydrate Feeding** protocol.

TOTAL CARBOHYDRATE INTAKE

Carbohydrate intake should change depending on body composition goals and training schedule.



CARBOHYDRATE TIMING

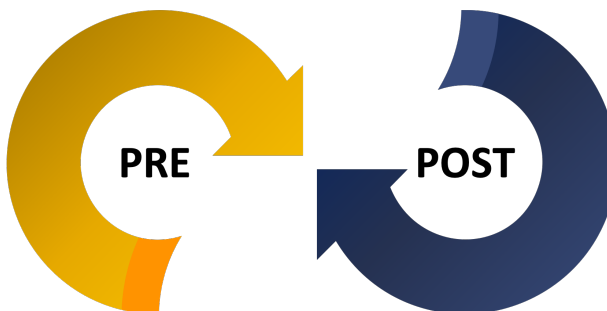


By providing carbohydrates pre & post training you can increase the readily available fuel for exercise and replenish energy stores ready for subsequent sessions.

CONSUME HIGH QUALITY CARBS

Intake of high-quality carbohydrates pre training leads to:

- INCREASED WORK **01**
- INCREASED STIMULUS **02**
- INCREASED CALORIES BURNT **03**



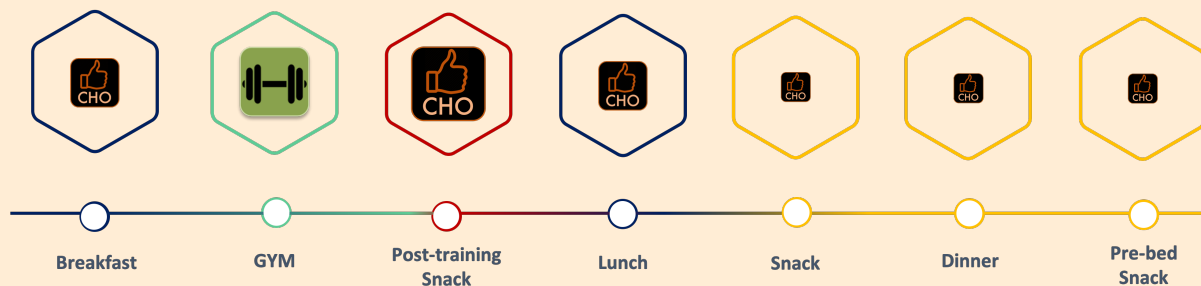
CONSUME CARBS WITHIN 30 MINS

Eating carbohydrates within the first 30 minutes post-exercise increased your muscle ability to store carbohydrates:

- 01** HIGHER % OF CARBS STORED IN THE MUSCLE
- 02** MORE ENERGY FOR SUBSEQUENT SESSIONS

STRATEGIC FEEDING

Below is an example day abiding by the Strategic Carbohydrate Feeding Protocol:



The size of the represents the portion size.

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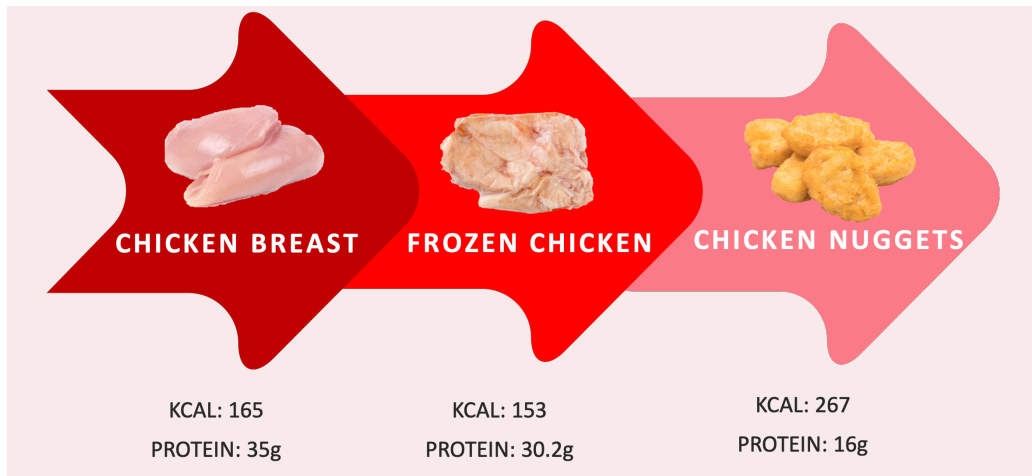
PROTEIN



Protein is the building blocks for new tissue and the repair of body cells.

A large proportion of our body is made up of amino acids; skin, hair, ligaments, tendons and muscle.

In order to repair and adapt optimally, quality sources of protein need to be selected in order to provoke a greater anabolic stimulus.

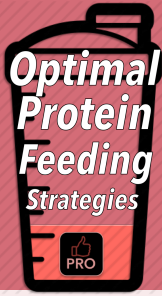


During processing, products often undergo a lot of changes. Processed proteins often contain cut offs, bone and connective tissue. This leads to drop in protein quantity and quality whilst providing hidden calories and often artificial ingredients.

Below are the **ideal protein selections**



After you've begun eating ideal proteins, you can begin following the Optimal Protein Feeding Strategies to maximise muscle mass.



To stimulate muscle protein synthesis to its maximum you must following the

Optimal Protein Feeding Strategies

Total Protein Intake

The current recommendations for strength and power athletes are to consume a minimum of 2g/kg/day of protein.

Therefore if you weigh 90kg you need to consume at least 180g protein per day

60kg = 120g protein per day

Protein Hit Before Bed

Consume a slow release protein before bed (casein the major protein found in milk), to help sustain muscle recovery and repair throughout the night.

STEP 01



STEP 02



STEP 03



STEP 04



Protein Timing

Smaller, more regular protein feedings throughout the day, will maximise muscle protein synthesis and optimise muscle repair and regeneration.

Protein intake should occur every 3-4 hours throughout the day.

Post-Training Protein

The amount of protein consumed following training should reflect the amount of muscle groups stressed during that session.

Single muscle group sessions
e.g. arms = 20g protein-post training

Full body strength sessions
e.g. deadlifts & squats = 40g protein post-training



Protein Timing Continued



07:00

Breakfast

Porridge
Omelette
Smoothie
Overnight Oats

10:00

Snack

Whey Shake
Smoothie
Yoghurt Bowl
Chicken Wrap

13:00

Lunch

Spaghetti Bolognese
Chilli Con Carne
Chicken Wrap
Bagel with Meat Filling

16:00

Snack

Whey Shake
Smoothie
Yoghurt Bowl
Chicken Wrap

19:00

Dinner

Steak
Chicken Fajitas
Cottage/Shepard's Pie
Meat Casserole

22:00

Pre-bed

Smoothie
Pint of Milk
Yoghurt Bowl

Avoid muscle protein breakdown by consuming a protein rich food every 3-4 hours. This will ensure you remain in a **positive protein balance**.

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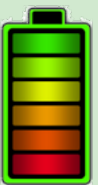
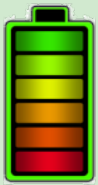
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FATS



Fats are your bodies main energy source, but also make up part of the structure of all cell membranes, brain tissue, nerve sheaths, bone marrow and massively contribute to hormone production.



Fats are your main energy source because its far more economic for your body to utilise them; this is because, per gram fats provide the most energy:

Protein = 4kcal per 1g Carbohydrate = 4kcal per 1g Fat = 9 kcal per 1g

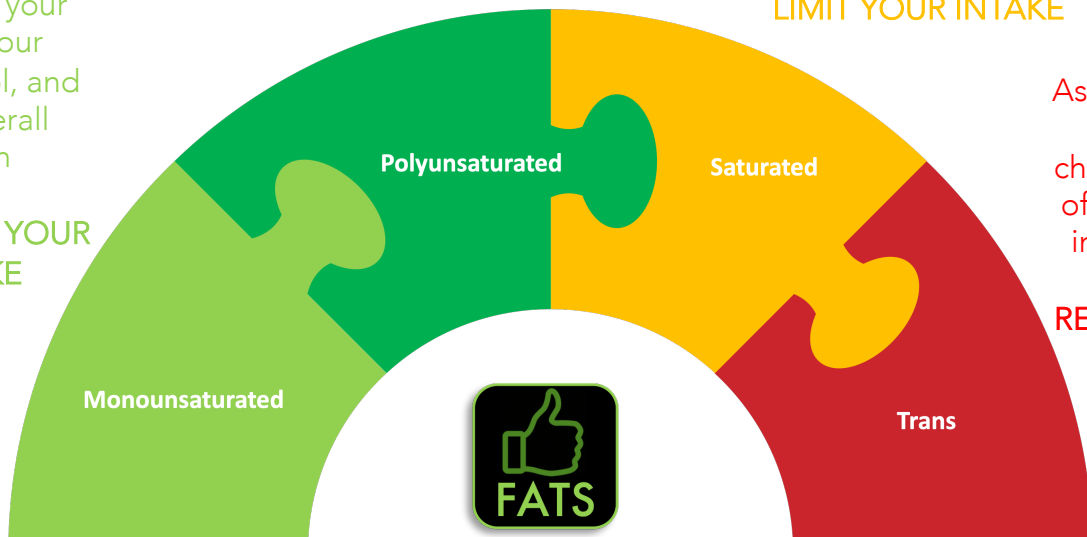
There are four types of fats:

Good for your heart, your cholesterol, and your overall health
INCREASE YOUR INTAKE

Plays an integral role in hormone production.
Associated with increasing cholesterol
LIMIT YOUR INTAKE

Good for your heart, your cholesterol, and your overall health
INCREASE YOUR INTAKE

Associated with increasing cholesterol, risk of disease and inflammation
REDUCE YOUR INTAKE



SOURCES OF FATS:

- Canola Oil
- Olive Oil
- Olives
- Monounsaturated Margarine
- Spreads
- Avocado
- Most Nuts
- Egg Yolk

Monounsaturated Fats

- Most Vegetable Oils (Sunflower, soybean, corn, cottonseed)
- Polyunsaturated Margarine
- Spreads
- Linseeds
- Some Nuts
- Wheatgerm
- Oily fish and Fish oils

Polyunsaturated Fats

- Fatty meats
- Chicken skin
- Butter
- Cream
- Full cream milk
- Cheese
- Lard
- Coconut oil
- Palm oil
- Chocolate

Saturated Fats

- Biscuits
- Cakes
- Pastries
- Doughnuts
- Fast Food
- Deep Fried Foods

Trans Fats



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VITAMINS & MINERALS



Vitamins & Minerals play a major role in virtually every metabolic process that occurs within the body; they are essential.

The importance of vitamins and minerals cannot be overstated. Achieving recommended intakes will promote vast health and performance benefits including:

Immune Function

Muscle Growth & Repair



Energy Production

Bone Formation

To name but a few!

Vitamin & Mineral Intake

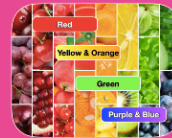
Achieving optimal amounts of vitamins & minerals can be achieved through the diet by:

Eating whole foods over processed foods where possible



This will naturally increase the vitamin & mineral content of the diet leading to an increase in calorie efficiency

Hit your Fruit & Vegetable Intake Targets



Fruit & Vegetables are your main contributor of vitamins and minerals. Targets can be found below

PORTION SIZE

1 portion =
80g of fresh/frozen fruit
or vegetables
OR
40g of dried fruit

COLOUR

Consume a minimum of
2 portions from each
colour set per day
*These include; RED, GREEN,
YELLOW/ORANGE,
PURPLE/BLUE*

DISTRIBUTION

Try to consume at least
two portions of either
fruit or vegetables with
each portion of food



FRUIT & VEGETABLE INTAKE TARGETS



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HYDRATION



Water makes up 70% of the body and 80% of the brain. An optimal hydration status is crucial for health and performance.



DRINK SMART PRINCIPLES

01

Consume Adequate Fluids on a Daily Basis

Guidance based upon body weight can be found below.

02

Drink Little and Often

Consuming small amounts encourages better retention. Consuming large volumes (guzzling) in a short period of time increases urine output

03

Consume the Correct Fluids

In general, fluid intake should come from sources such as: *filtered/bottled water, sparkling water, green teas, fruit teas & milk*. Foods also contribute to a good hydration status. These foods include; *soups, yoghurts, smoothies & fruit*.

04

Consume Fluids with Electrolytes

Electrolytes aid the body in retention of fluids. Electrolytes come in different forms including; *chlorine, potassium, phosphate, magnesium, calcium & sodium*. Food contains electrolytes, always have a glass of water with food.

05

Avoid Inappropriate Beverages

These include; *alcohol, Red Bull, Lucozade Energy, Monster, Relentless, Coca-Cola etc.*

CONSUME ADEQUATE FLUIDS ON A DAILY BASIS

THESE TARGETS DO NOT INCLUDE CONSUMPTION DURING EXERCISE. DRINK TO THIRST DURING EXERCISE TO CATER FOR FURTHER LOSSES OF FLUIDS THROUGH SWEATING

BELOW 90kg

Green marketing is a practice whereby companies seek to go above and beyond traditional.

2.5L

BETWEEN 90-110KG

Green marketing is a practice whereby companies seek to go above and beyond traditional.

3.0L

ABOVE 110KG

Green marketing is a practice whereby companies seek to go above and beyond traditional.

3.5L



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SUPPLEMENTS



As the name suggests, food supplements are only intended to 'supplement' people's diets and not replace healthy foods.

SUPPLEMENT FACTS

FACT

44% of UK Anti-doping positive tests in the 2012 testing year were caused by prohibited substances contained in supplements



FACT

In 2008 a HFL study involved analysis of 152 supplements (purchased via stores/internet in UK)

10.5%

contained prohibited steroids and/or stimulants

FACT

In 2013, twenty-four top* supplement brands were selected from 12 countries

- 114 products purchased (internet/stores) and tested
- Energy products, protein products, other
- Powders, tablets, capsules, liquids, bars

1 in 10

contained steroids and/or stimulants

No informed sport registered products were included

Before using a supplement, ask yourself.....

Is it worth the risk?

BEFORE USING A SUPPLEMENT, ASK YOURSELF THE FOLLOWING QUESTIONS.....

IS IT PROVEN TO IMPROVE HEALTH OR PERFORMANCE?

YES

IS IT LACKING IN SUFFICIENT QUANTITIES IN FOOD?

YES

NO

HAVE YOU CHECKED THE PRODUCT FOR PROHIBITED SUBSTANCES?

YES

NO

HAS THE PRODUCT BEEN BATCH TESTED?

YES

NO

NO

DO NOT USE

CONSIDER THE PRODUCT

If you **FAIL** a drugs test because of a contaminated supplement you will **LOSE YOUR JOB**



If you do purchase a supplement



Ensure it is **INFORMED SPORT** registered.

SPORT



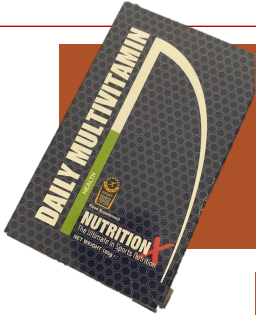
Our chosen supplement supplier is:

NUTRITION X
The Ultimate in Sports Nutrition
Discount code =
NXCLUB

All products are
INFORMED SPORT



RECOMMENDED PRODUCTS:



Multivitamin

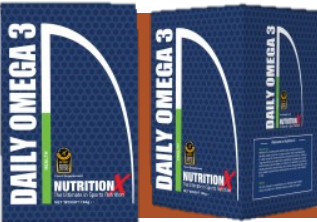
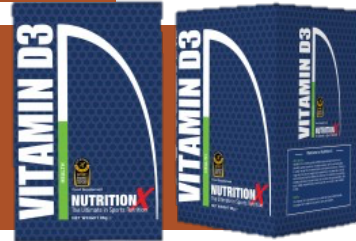
Used in every metabolic process including, energy production, immune function, muscle repair and bone formation.

Price: £17.49

Vitamin D3

Used in many metabolic functions including bone formation, muscle regeneration and immune function.

Price: £10.49



Omega-3

Improves cognitive function, muscle repair, recovery capacity and cardiac health.

Price: £17.49

Creatine Monohydrate

Energy stored within the muscle, used for supra-maximal efforts

Price: £8.39



Whey Protein

Maximally spikes muscle protein synthesis for maintenance and building muscle mass.

Price: £38.49

Repair Shot

Contains collagen and vitamin C, both nutrients needed to stimulate collagen synthesis to promote ligament and tendon health.

Price: £17.49

