

The Effects of Basic Nutrition

What Is Nutrition?

Nutrition is the process of how the body intakes and utilises foods and nutrients vital to health in promoting growth, maintenance and reproduction cells.

- **What we eat and drink affects our health.**
- **There are seven essential food groups our body needs.**

The Seven Essential Food Groups

- **Protein**
- **Carbohydrates - Complex Carbohydrates**
- **Simple Carbohydrates**
- **Fats - Saturated Fats**
- **Unsaturated Fats**
- **Water**
- **Fibre**
- **Vitamins**
- **Minerals**

Protein

- **The digestive system breaks down protein in foods we eat**
- **Absorbed into the bloodstream for growth and repair (White blood cells)**
- **Recommended Dietary Intake = 15%**
- **Increase to 30% for high muscular strength and endurance training**
- **1 gram of protein = 4 calories**

Protein Food Sources

- **Fish**
- **White Meat**
- **Quorn/ Torfu**
- **Milk**
- **Eggs**
- **Pulses (chick peas/ beans)**



Carbohydrates

- **Divided into complex carbohydrates and simple carbohydrates (sugars = glucose)**
- **The digestive system absorbs carbohydrates into transports them to cells throughout the body**
- **Provides cells with power/ energy:**
 - Simple carbohydrates = instance energy release**
 - Complex carbohydrates = slow energy release**
- **Excess sugar is stored in the liver**
- **When liver stores are full, it is stored at fat**



Carbohydrates

- **When exercising for short periods, liver stored will be used for energy.**
- **When exercising for long periods, fat will be used for energy.**
- **Recommended Dietary Intake = 55%**
- **Increased to 60-70% for high cardiovascular training**
- **1 gram of Carbohydrates = 4 Calories**



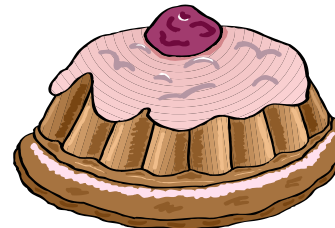
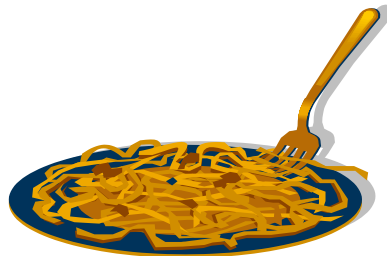
Carbohydrate Food Sources

Complex Carbohydrates:

- Bread
- Pasta
- Rice
- Potatoes
- Cereal

Simple Carbohydrates:

- Sweets
- Chocolate
- Cakes
- Fruit
- Jam



Fats

- **Fats are essential for insulation and to protect vital organs**
- **Major source of energy in the body - broken down and used in muscles for fuel**
- **Excess fat is stored**
- **Fats can be divided into saturated fat and unsaturated fat**
- **Saturated fats can come from animal or vegetable products - clog the arteries**
- **Unsaturated fats come from plants, seeds or fish - help lower cholesterol**

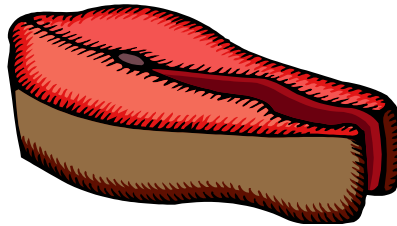
Fats

- **When exercising for long periods, fat will be used for energy.**
- **Recommended Dietary Intake = 30%
40-50g**
- **Reduced to 15-30% when training**
- **1 Gram of fat = 9 Calories**

Fat Food Sources

Saturated Fat:

- Biscuits/ Cakes/ Pastries
- Butter
- Egg
- Crisp
- Burgers
- Kebabs
- Chips
- Red Meat



Unsaturated Fat:

- Nuts
- Olive/ Sunflower oil
- Sesame/ pumpkin seeds
- Fish
- Avocado



Water

- **80% of the body is Water**
- **Water is lost through respiration, sweating and urine**
- **Approximately one litre per day is lost**
- **Dehydration can reduce attention span and cause headaches/ Irritability**
- **During exercise can cause dizzy spells, reduced performance and fainting**
- **Recommended Daily Intake = 8 glasses/ 2 litres**

Fibre

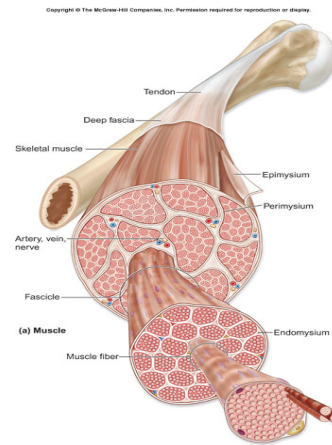
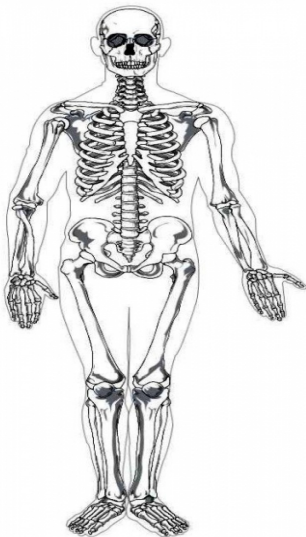
- **Fibre is absorbed in the digestive system to get rid of waste products**
- **Absorbs water to make waste disposal more efficient**
- **Protect against high cholesterol heart disease and bowel cancer**
- **Suggested Recommendations = 18-30g daily or 1/3 of dietary intake**

Fibre Food Sources

- **Lentils**
- **Brown rice, bread and pasta**
- **Fruit and Vegetables**
- **Beans (Kidney beans, chick peas)**
- **Whole Grain cereals**

Vitamins

- Supports growth and repair of bones, teeth and skin
- Assist in chemical reactions – converting food into energy



Vitamins

Vitamin A - Maintains health of the eye

Sources – Carrots, sweet potato and spinach

Vitamin B(s) - Converts food sources to energy and maintains digestion

Sources – Variety of Carbohydrates, fats and proteins

Vitamin C – Growth and repair of skin, bones, teeth. Helps immune system fight infections and viruses

Sources – Fruit and Vegetable (Oranges and Lemons)

Vitamin D – Absorbs calcium to maintain healthy bones and joints.

Sources – Sunlight, fish, milk and egg yolk.

Minerals

- **Growth and repair of skin, bones, teeth and production of tissues/ muscle fibres**
- **Assist in chemical reactions - transportation of fats and absorption of vitamins**

Minerals

Calcium – Bone formation

Sources – Green vegetables, nuts, milk and cheese

Iron – Production of red blood cells

Sources – Red meat, beans and green vegetables

Phosphorus - Strengthens bones and teeth

Sources – Dairy products, bread, red meat/ poultry

Potassium and sodium – Responsible for nerve impulses, controls blood pressure

Sources – Salt, fruit and vegetables