Year 8 Food Knowledge Organiser

Food Nutrition

The Effects of a Poor Diet

- Too high a calorie intake vs activity levels = weight gain which can lead to obesity.
- Too low a calorie intake vs activity levels = weight loss which can lead to anorexia.
- Too much fat (particularly saturated fat) can cause cholesterol build-up in arteries, leading to Coronary Heart Disease (CHD), weight gain (obesity).
- Too high a sugar consumption can lead to dental decay, weight gain (obesity), type 2 diabetes.
- Too low a fibre intake = constipation, poor skin, increased risk of bowel cancer.
- Too high salt intake increases blood pressure and increased risk of strokes.

Key Vocabulary

Using the mat and your own research, create definitions for the following words. Explain why these are important for food nutrition.

Nutrients
Macronutrients
Micronutrients
Diet
Obesity
Anorexia
Cholesterol
Protein
Carbohydrates
Fats
Vitamins
Minerals
Fibre

Questions

1. Name three foods that are a good source of protein.
2. Why should we not drink more than one glass of fruit juice/smoothie a day?
3. Why should we eat five portions of fruit and vegetables a day?
4. If a diet is high in sugar and saturated fat, what effects could this have on health?
5. What dietary recommendation would you make to a teenage girl who is training to compete in cross country running events?

Quick Questions

1. What are the two types of nutrient group?
2. What is the name of the dietary recommendation to eat a balanced diet?
3. Which nutrient would you consume for growth and repair?
4. Which factors affect our nutritional requirements?
5. Why is increased protein required in a teenager's diet?
6. What are the macronutrients in food?
7. What is the required consumption of milk for 2-5 year olds?
8. What are the recommendations of the 'Eatwell Guide'?
9. When can the calorie intake of women be increased by 200Kcal?
10. At what life stage would you need to increase calcium and Vitamin D intake to avoid brittle bones?

Nutrition

- Food and drink supply the substances (**nutrients**) the body requires to function properly, e.g. grow, develop, repair and maintain and be healthy.
- If nutrients are supplied in the correct amounts as part of the **diet**, a healthy lifestyle can be achieved and the risk of food-related diseases/disorders can be reduced.
- Age, gender and physical activity levels affect nutritional requirements.

Nutrients

There are two main types of nutrient:

- Macronutrients – needed in large amounts. These include protein, carbohydrates (starch, sugar and dietary fibre) and fats.
- Micronutrients – needed in little amounts, these include vitamins (A,D, E, K, B group & C) and minerals (calcium, iron).

Functions of Nutrients

- Protein – growth, repair, maintenance and secondary source energy
- Carbohydrates – energy
- Fats – protect, insulate and provide energy
- Vitamins – healthy skin/tissue, eye, teeth, bones, fights infections, release energy and form blood
- Minerals – develop bones, teeth and blood cells

Water is also required to maintain body health, cell formation, get rid of waste and regulate body temperature.

Healthy Eating and a Balanced Diet

To achieve a healthy diet, the Eatwell Guidelines should be followed:

- 1/3 (approximately 39%) of the diet should consist of fruit and vegetables, at least 5 a day.
- 1/3 (approximately 39%) of the diet should consist of starchy carbohydrates, ideally wholegrain.
- 12% protein foods – including two portions of fish, lean meat or vegetarian alternatives. Reduce consumption of processed meat products.
- 8% dairy foods – including low fat or alternatives, e.g. soya milk.
- 1% fat - small amounts of unsaturated fats.
- 6-8 glasses of fluid a day , a maximum of one fruit juice.
- Sugary, fatty and salty foods should be restricted.

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Principles of Food & Nutrition

Portion Size

To maintain a healthy weight, 2,000 Kcal are required by women per day and 2,500 Kcal by men per day. It is recommended that the correct portion sizes are consumed to achieve this:

- Protein – palm-sized
- Carbohydrates – fist-sized
- Fats, e.g. butter/mayonnaise – tip of thumb
- Fruit 1 medium piece; 1 heaped tablespoon (tbsp.) dried fruit; 3 heaped tbsp. vegetables; 150ml or 1 small glass of fruit juice/smoothie.

Children Dietary Needs

- 2-5yr olds: small meals regularly; 300ml milk; protein, including two portions of fish, pulse/legume vegetables.
- 5-12yr olds: increased energy and nutrients needed due to growing quickly and increased activity; carbohydrate and some fat for energy required; calcium and Vitamin D for bone and teeth development.
- Teenagers: growth spurts and muscle development = increased protein; increased iron and Vitamin C due to periods and prevention of anaemia; calcium and Vitamin D for growth and increased bone density. **Stress can affect eating habits, causing anorexia or obesity.**

Adults

- Men = taller/ larger, more lean muscle
- Women = replace lost iron
- Calcium and Vitamin D decrease risk of developing bone disease with age and in menopause for women
- Pregnancy = increase in calorie intake in later stages by 200Kcal, increase in folic acid to decrease chances of birth defects, e.g. Spina Bifida.

The Elderly

- Muscle converted to fat therefore reduced energy need.
- Reduced saturated fat to lower risk of heart disease.
- Smell and taste changes therefore food taste changes.
- Calcium and Vitamin D prevent bones being brittle.
- Vitamin B12 = healthy brain activity, avoiding memory loss.
- Fibre = prevents constipation.
- Vitamin A = good eye health.