

The Nutrition Honour

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Sunday 31st May





Participant Worksheet

Honour Requirements

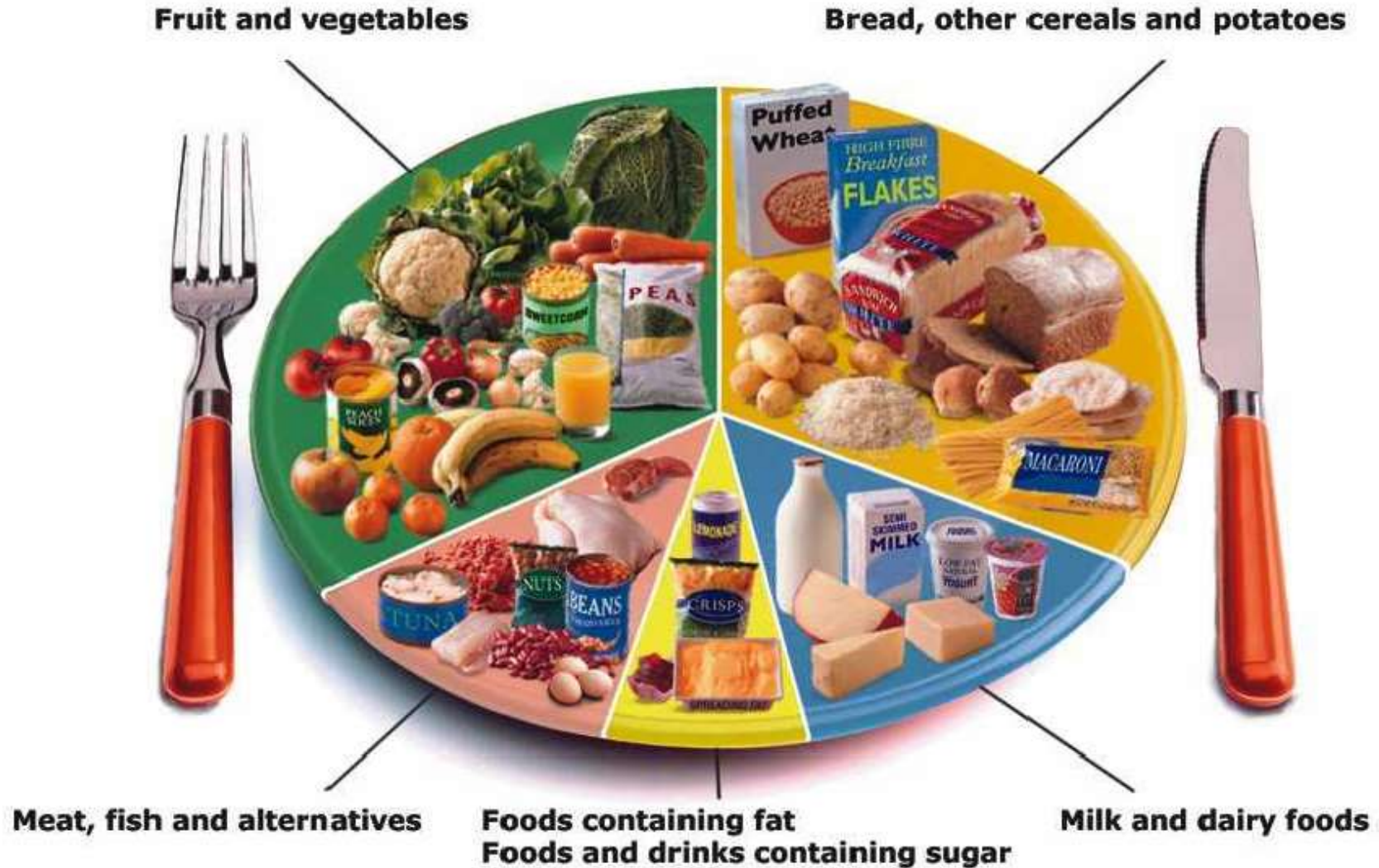
Honour Requirements (available [here](#))

1. Draw and explain the Healthy Plate guide in its various forms. List the number of servings required from each group each day. Why is it important to eat a balanced diet?
2. Explain the difference between the following:
 - a. Lacto-ovo vegetarian
 - b. Ovo vegetarian
 - c. Vegan vegetarian
3. Plan a two-day menu, containing a balanced lacto-ovo vegetarian diet utilizing the Healthy Plate.
4. What is another name for:
 - a. Vitamin B1
 - b. Vitamin B2
5. List at least three significant food sources of the following nutrients:
 - a. Vitamin C
 - b. Vitamin A
 - c. Vitamin B1
 - d. Vitamin B2
 - e. Iron
 - f. Calcium
6. Why is it important to drink plenty of water every day? How much water should you drink every day?
7. Name three common diseases that can be controlled by diet.
8. What is the difference between whole wheat flour and white flour, and which one has a higher nutritive value?
9. What does Dietary Reference Intake mean?
10. Why is it important not to take excessive amounts of some vitamins and minerals?

**What's your favourite
food?**

1a. The Dietary Guidelines in it's Various Forms

The Balance of Good Health



The UK's 1st set of dietary guidelines (1994)

The eatwell plate



Use the eatwell plate to help you get the balance right. It shows how much of what you eat should come from each food group.



Eatwell Guide

Use the Eatwell Guide to help you get a balance of healthier and more sustainable food. It shows how much of what you eat overall should come from each food group.

Check the label on packaged foods

Each serving (150g) contains

Energy 1046kJ 250kcal	Fat 3.0g	Saturated fat 1.3g	Sugars 34g	Salt 0.9g
13%	LOW	LOW	HIGH	MED

of an adult's reference intake
Typical values (as sold) per 100g: 697kJ/ 167kcal

Choose foods lower in fat, salt and sugars

Eat at least 5 portions of a variety of fruit and vegetables every day

Fruit and vegetables



Eat less often and in small amounts

Choose wholegrain or higher fibre versions with less added fat, salt and sugar

Potatoes, bread, rice, pasta and other starchy carbohydrates

6-8 a day

Water, lower fat milk, sugar-free drinks including tea and coffee all count.

Limit fruit juice and/or smoothies to a total of 150ml a day.

Beans, pulses, fish, eggs, meat and other proteins

Eat more beans and pulses, 2 portions of sustainably sourced fish per week, one of which is oily. Eat less red and processed meat

Dairy and alternatives

Choose lower fat and lower sugar options



Oil & spreads

Choose unsaturated oils and use in small amounts

Per day 2000kcal 2500kcal = ALL FOOD + ALL DRINKS

2016- Current

1b. List the Number of Servings
from each food group

The Eatwell Guide: Messages



Fruit & Vegetables:
5 a day

Carbohydrates: base
meals on wholegrain
choices where
possible

Dairy/alternatives:
choosing lower fat,
lower sugar options

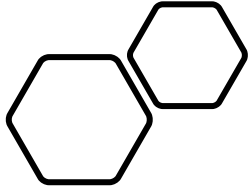
Protein – include
various types. Include
2 portions of fish
every week, 1 oily

Fats - Choose
unsaturated oils and
spreads and eat in
small amounts

Drinks: 6-8
cups/glasses of fluid a
day.

High fat, salt or sugar
foods and drinks:
have these less often
and in small amounts

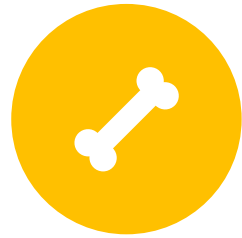
1c. Why is it important to eat
a balanced diet?



VITAMINS AND MINERALS
TO KEEP OUR BODIES
WORKING CORRECTLY



GIVES US ENERGY



KEEPS OUR BONES
STRONG



HELPS PREVENTS SOME
DISEASES



HELPS US TO KEEP A
HEALTHY BODY WEIGHT

2. The difference between vegetarian diets:



**LACTO-OVO
VEGETARIAN**

eat both dairy products and eggs
(most common type of vegetarian diet)



**LACTO
VEGETARIAN**

eat dairy products but not eggs



**OVO
VEGETARIAN**

eat eggs but not dairy products



**VEGAN
VEGETARIAN**

don't eat eggs, dairy or any other
animal products. Only plants or
foods made entirely from plants

Nutrients



Macro nutrients

Carbohydrates

Proteins

Fats

Needed in larger amounts (g) from diet
Basic jobs = energy, repair tissues

Micro nutrients

Vitamins - Compounds that help regulate & support chemical reactions

Minerals - Elements used to promote chemical reactions & form body structures

Needed in very small quantities (mcg) in the diet

3. List 3 significant sources of
the following nutrients:

Vitamin C



Helps to absorb iron, prevent scurvy, needed for a range of essential metabolic reactions in the body, immune system



Water soluble



Food sources: Orange, mango, strawberries, red sweet pepper, grapefruit, kiwi, sweet potato, broccoli

Vitamin A



Helps with vision, bone health, reproduction, immune system, keeping cells in airways healthy



Fat soluble vitamin



Food sources: carrots, sweet potato, pumpkin, apricots, mango, papaya, kale, spinach

Vitamin B1



Also known as Thiamin



Helps with carbohydrate metabolism,
nerve function & heart function

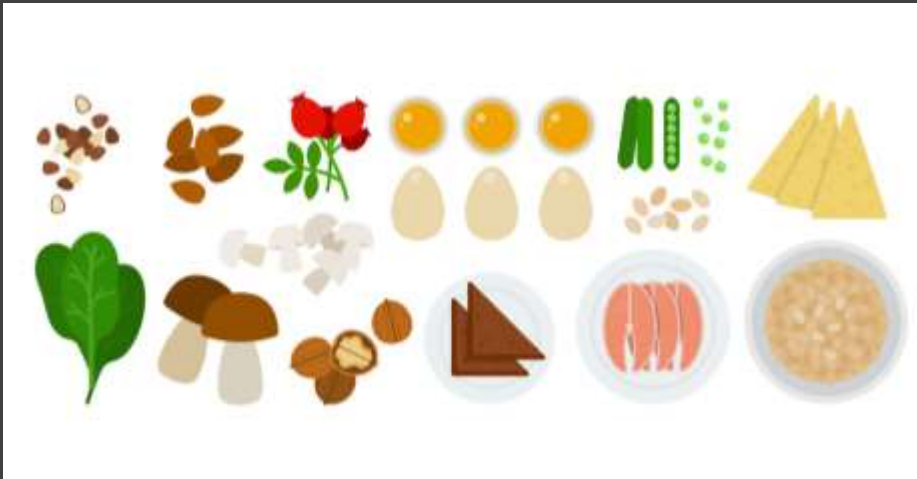


Water soluble vitamin



Food sources: Soya milk, sunflower seeds,
pluses (legumes), wholegrain
carbohydrates, fortified breakfast cereals

Vitamin B2



Also known as Riboflavin



Helps with carbohydrate metabolism



Water soluble vitamin



Food sources: Milk, yoghurt, mushrooms, spinach, fortified breakfast cereals (Weetabix, multigrain cheerios), egg

Iron



Helps red cells to transport oxygen around the body, helps cells produce energy, needed for brain and immune function



Food sources: Kidney beans, spinach, green beans, broccoli, potato, dried fruits, red meat, tofu

Calcium



Image credit: istockphoto.com/piotr_malczyk



>99% in the body used to grow, develop & strengthen bones & teeth



Also needed for blood clotting, muscle contraction, nerve signalling



Vitamin D helps to absorb calcium



Food sources: Milk & yoghurt (or fortified plant-based alternatives, cheese, spinach, fortified cereals, tofu, broccoli, green beans, almonds)

5a. Why is it important to drink
plenty of water every day?

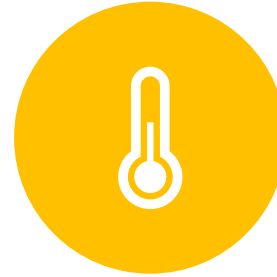
Functions of Water



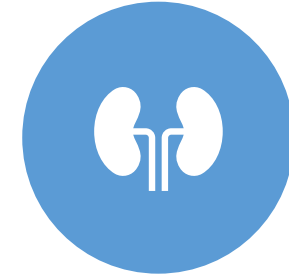
MAINTAINS CHEMICAL
PROCESSES



BLOOD VOLUME



BODY TEMPERATURE
REGULATION



REMOVAL OF WASTE
PRODUCTS



MAKES UP BODY FLUIDS, LIKE
LUBRICANTS AROUND JOINTS



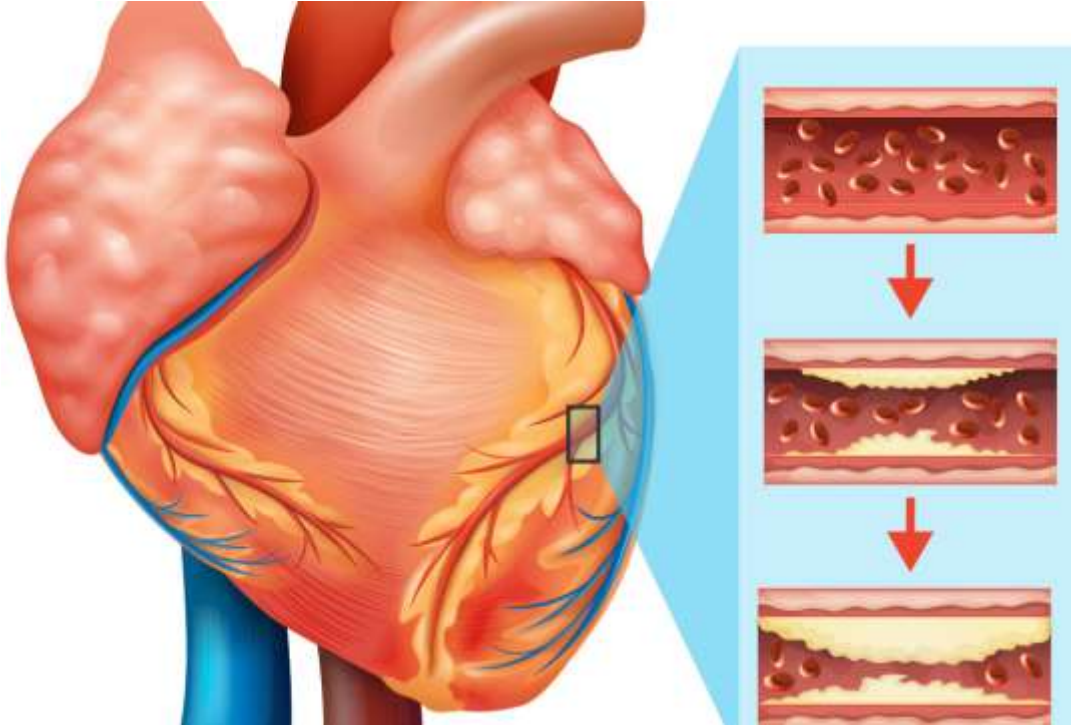
NEEDED FOR DIGESTION –
PART OF SALIVA, BILE



AMNIOTIC FLUID – SHOCK
ABSORBER AROUND A
GROWING FOETUS

6. Name three common
diseases that can be
controlled by diet

Cardiovascular (Heart) Disease



- Narrowing, blocking of blood vessels - Usually from cholesterol build-up
- Can lead to heart attack, stroke
- Diet changes that can help:
 - Reduce fat & sugar intake
 - Reduce animal fats (saturated)
 - Swapping to plant fats (unsaturated fats)
 - Increase fruit, vegetables and wholegrains

Hypertension



- Blood pressure in arteries too high
- Often caused by too much salt & alcohol in the diet, being overweight, not enough exercise
- Can lead to: heart attack, stroke, kidney failure, heart failure, eyesight problems, vascular dementia
- Diet changes that can help:
 - Reduce salt
 - Reduce fat & sugar intake
 - Reduce animal fats
 - Increase fruit, vegetables and wholegrains

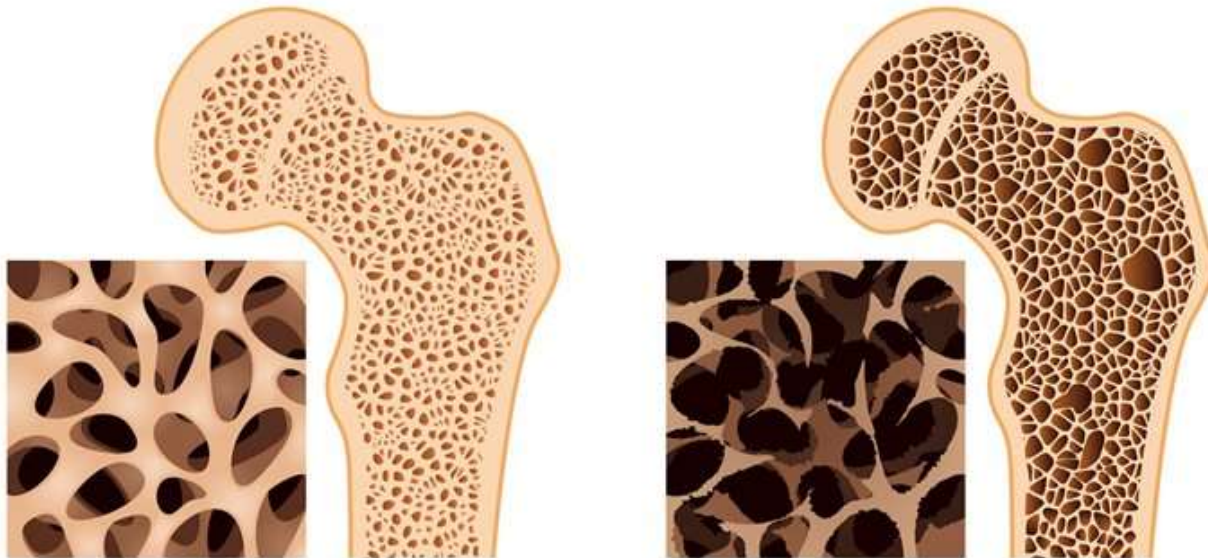
Anaemia (Iron-Deficiency)



- Not enough iron in the diet, or not being absorbed properly
- Can lead to: tiredness, shortness of breath, heart palpitations
- Diet changes that can help:
 - Choosing iron-rich foods
 - Eating with Vitamin C-rich foods
 - Iron supplement
(discuss with a healthcare professional)

Osteoporosis

- Low bone density, weak bones, break easily
- Many possible causes, not just diet
- Diet changes that can help:
 - Getting enough calcium and Vitamin D when you are young!



Healthy bone

Osteoporosis

Type 2 Diabetes

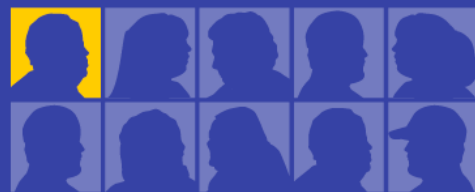
Obesity is fuelling a rise in Type 2 diabetes

If trends persist,
people will be obese by 2034

1 in 3



and **1 in 10**
will develop Type 2 diabetes

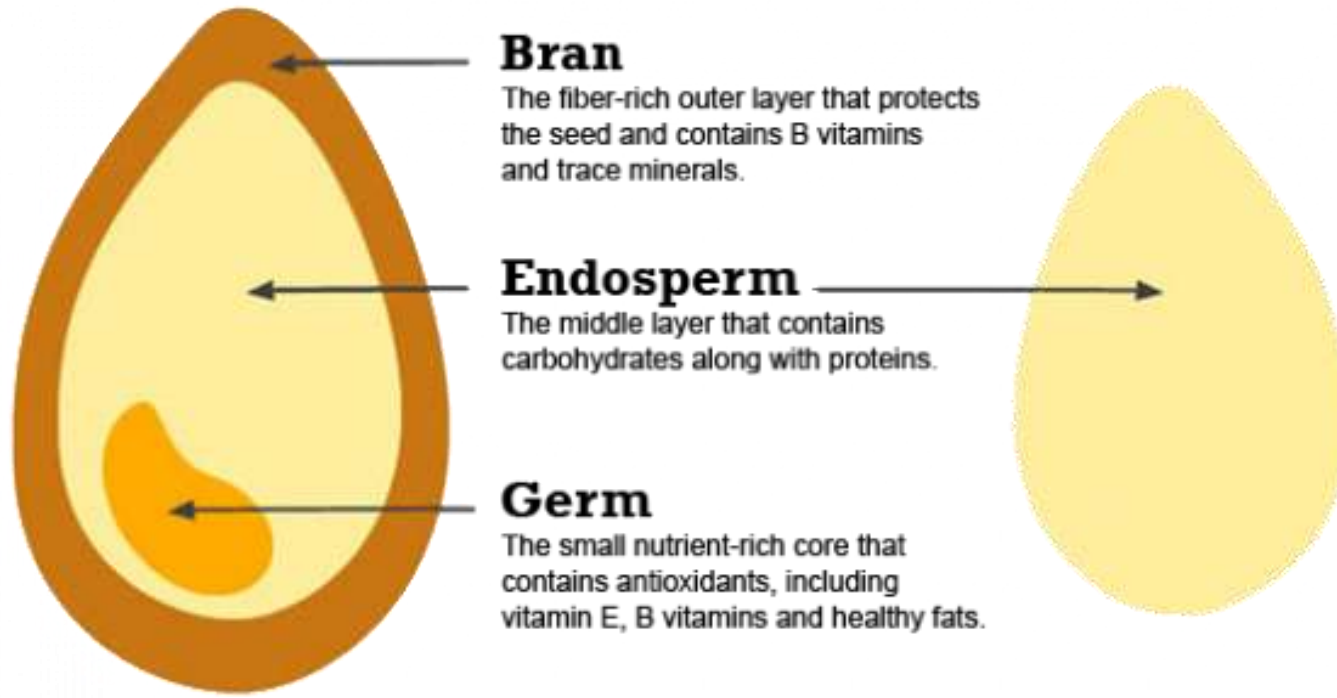


- When the body is unable to regulate the sugar in blood – can go too high
- Usually caused by being overweight
- Not just from eating too much sugar – eating too much of anything that causes weight gain (sugar, fats)
- Diet changes that can help:
 - Reduce fat & sugar intake
 - Increase fruit, vegetables and wholegrains
- + Exercise!!

7a. What is the difference between whole wheat flour and white flour?

7b. Which one has the higher nutritive value?

Whole Grain vs. "White" Grain



- Wholegrain flour = contains all parts of the grain: bran, germ, and endosperm . E.g. wholemeal bread, brown rice

- White flour =. Contains mostly endosperm, bran and germ removed during milling

- Wholegrain flour contains more fibre, micronutrients and healthy fats

Whole wheat flour and White flour

8. What does Dietary Reference Value or Reference Intake mean?

Reference Intake

Amount that is enough to ensure the needs of most the population are being met.

- rough idea of how much the average adult needs to eat in a day of main nutrients (energy, fat, saturated fat, carbohydrate, sugar, protein, salt)

Each serving (150g) contains

Energy 1046kJ 250kcal	Fat 3.0g LOW	Saturates 1.3g LOW	Sugars 34g HIGH	Salt 0.9g MED
13%	4%	7%	38%	15%

of an adult's reference intake
Typical values (as sold) per 100g: 697kJ/ 167kcal

Nutrition

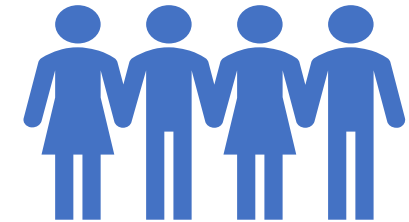
Typical values	100g contains	Each slice (typically 44g) contains	% RI*	RI* for an average adult
Energy	985kJ 235kcal	435kJ 105kcal	5%	8400kJ 2000kcal
Fat	1.5g	0.7g	1%	70g
of which saturates	0.3g	0.1g	1%	20g
Carbohydrate	45.5g	20.0g		
of which sugars	3.8g	1.7g	2%	90g
Fibre	2.8g	1.2g		
Protein	7.7g	3.4g		
Salt	1.0g	0.4g	7%	6g

This pack contains 16 servings
*Reference intake of an average adult (8400kJ / 2000kcal)

Dietary Reference Values (DRVs)

Estimates of nutritional requirements for groups of people in a population

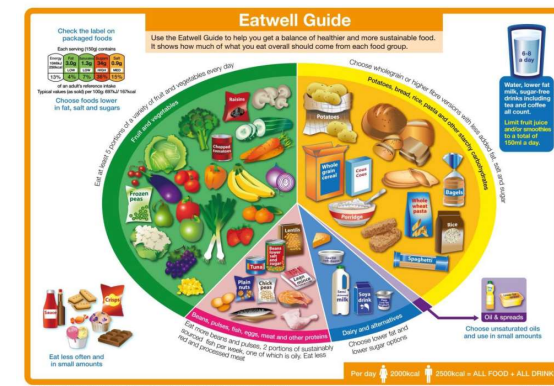
- Takes into account age, body size, activity levels, gender and physiological state



- Gives more specific recommendations to the Eatwell Guide

<https://www.gov.uk/government/publications/the-eatwell-guide>

Government Dietary Recommendations



9. Why is it important not to take excessive amounts of some vitamins and minerals?

Large amounts can be toxic to the body



Vitamins

- A – birth defects, nerves, liver, bone & skin disorders
- D - weakens bones and heart
- E – reduces blood clotting, weakness
- C – diarrhoea
- B6 – nerve damage



Minerals

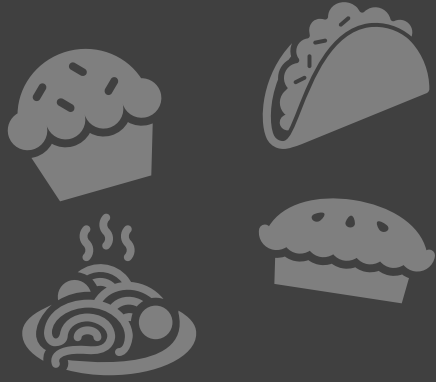
- Iron – tummy upset, nausea, constipation, coma
- Fluoride – weakens teeth
- Zinc – stops absorption of other minerals
- Sodium – high blood pressure, dehydration

10. Plan a two-day menu, containing a balanced lacto-ovo vegetarian diet utilising the Eatwell Guide.

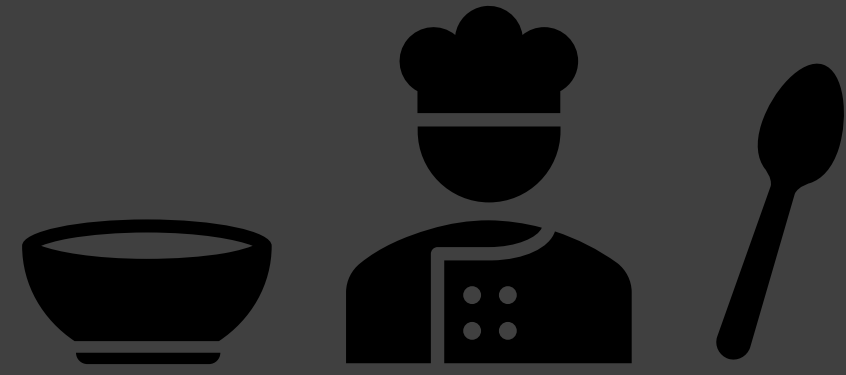
Day 1**Day 2****Breakfast:****Breakfast:****Snack (optional):****Snack (optional):****Lunch:****Lunch:****Snack (optional):****Snack (optional):****Dinner:****Dinner:****Snack (optional):****Snack (optional):****Drinks:****Drinks:**

Think, were can I put:

	Day 1	Day 2
1. Carbohydrate	Breakfast: peppers & mushroom omelette + wholemeal toast	Breakfast: 2 Weetabix, milk + sliced banana
	Snack (optional): 2 satsumas	Snack (optional): Handful nuts
2. Protein	Lunch: salad sandwich with meat alternative slice + yoghurt + piece fruit	Lunch: salad wrap with hummous + small packet popcorn
	Snack (optional): 2 rice cakes with peanut butter & veggie sticks	Snack (optional): Boiled egg
3. Vegetables	Dinner: Bean & veggie burrito with small portion cheese	Dinner: Spaghetti bolognaise with veggies & soya mince + side salad
4. Fruit & Dairy	Snack (optional): 2 rich tea biscuits + glass milk	Snack (optional): Handful berries + plain yoghurt
5. Fluids	Drinks: Water, sugar-free squash	Drinks: Water, sugar-free squash



Cooking Demo



1. Overnight Oats



Ingredients:

- ½ cup oats
- 2 tbs plain Greek yoghurt
- 100ml milk
- ½ cup chopped fruit or handful berries
- Handful chopped nuts
- Pumpkin / sunflower seeds

What you'll need:

- Large mixing bowl
- Measuring cups & spoons
- Sharp cutting knife
- Chopping board
- Mixing spoon
- Fridge
- Small bowl

Method

- Mix oats, yoghurt, milk & fruit in bowl
- Sprinkle nuts and seeds on top
- Let soak for at least 30mins
 - best left overnight in fridge to soak

2. Red Lentil Dhal



Ingredients:

- 1 cup red lentils (200g)
- 3 cups water
- 1 can coconut milk
- 1 can chopped tomatoes
- 1 chopped onion
- 2 cloves garlic, crushed
- 1 large potato, cubed
- 1 cup chopped veggies
- 2-3 tbs curry powder
- Juice of 1 lemon
- Pinch of salt
- 1 tbs vegetable oil

What you'll need:

- Large bowl
- Strainer
- Measuring cups & spoons
- Mixing spoon
- Large saucepan
- Sharp cutting knife
- Chopping board
- Bowls to serve

Method

- Put red lentils in large bowl, cover in water and let soak for 10mins
- Drain and rinse lentils
- Add oil and onion to saucepan, sauté on low heat til golden
- Add water & chopped tomatoes. Bring to boil.
- Add lentils, potatoes, spices (curry powder) & salt and cook on medium heat for 10mins
- Add vegetables, coconut milk and lemon juice. Cook for another 10mins
- Serve with wholemeal bread or wholegrain (brown) rice

Thanks for watching!
