

NAME _____

CLASS _____

2.1

Literacy

Test your nutrition knowledge!

Tick the main food sources of each nutrient.



Course Book p 36

Nutrients	Main functions	Milk, yoghurt, cheese	Lean meat, eggs, fish, poultry, nuts, legumes	Vegetables, legumes	Fruits	Bread, cereals, rice, pasta, noodles
P_____	Allows body to _____ and repair. Found in many body chemicals.					
C_____	Supply _____					
L_____	Source of energy. Provide _____ . Protect _____ and organs.					
Vitamin A	Necessary for growth, healthy skin and _____ .					
Vitamin C	Increases resistance to _____ .					
Calcium	For strong bones and _____ .					
Iron	Forms haemoglobin that transports _____ in the blood.					
W_____	Transports nutrients around the body. Assists _____ . Maintains body _____ . Moistens and protects body parts.					

2.2

Literacy

Diet-related disorders

Rachel and Daniel are newborn twins. If good food habits are established early in life then they may prevent the following diet-related disorders later in life.

Use the Word bank to complete the following sentences.

_____ Type 2 is when there is too much _____ in the blood because of a lack of _____.

Celiac disease is sensitivity to the _____ in wheat called _____. The lining of the small intestine can be affected making it difficult to absorb nutrients.

_____ results from consuming more energy from foods than the body needs. The extra energy is converted to body _____.

Anaemia results from a chronic shortage of _____. Fatigue is a common symptom because iron and protein form haemoglobin, which carries _____ in the blood.

Osteoporosis occurs from a lack of _____, resulting in fragile bones in adulthood.

Coronary _____ disease is where the arteries narrow from the build-up of fatty deposits, which may trigger a blood clot and cause a heart attack. A high _____ fat diet, obesity and high blood pressure are linked to the disease.

_____ or high blood pressure is linked to a high _____ diet.

High intakes of _____ and red meat appear to increase the risk of _____ cancer. Maintaining a healthy _____ and consuming a diet that includes a variety of vegetables, fruits, legumes, grains and some _____ 3 fatty acids appear to protect against the cancer.

Word bank

glucose
hypertension
calcium
diabetes
alcohol

gluten
saturated
omega
obesity
insulin

oxygen
sodium
colon
iron
heart

fat
protein
weight

2.3

Case study



Course Book p 51

Kayla's story

When she was 16 years old, Kayla almost died. Like many young Australians Kayla thought she had to be fit and lose weight so she could be like the pop stars, celebrities and other women portrayed in magazines. She believed people would like her more if she were skinnier. So each day her primary focus was on getting thinner.

She undertook several gym classes a day and would walk whenever she had free time. She started her diet by cutting back from three meals to two and then one and eventually none. Soon she was hiding food in her pockets and surviving on chewing gum, cups of tea and maybe a glass of orange juice. In six months she lost a third of her body weight.

During the first two months of her diet, Kayla's friends and family told her how well she looked but later they started telling her that she looked too thin. However, every time Kayla looked in the mirror she only saw a plump figure.

When her weight reached 40 kilograms Kayla's family knew they had a problem with their daughter. They tried to get her to eat but Kayla would lose her temper, kick throw her arms around and eventually lie on the floor and curl up in the foetal position. At 30 kilograms Kayla's body resembled skin and bones; but she still felt fat. She had little energy and her condition was life-threatening. Her parents were advised to take her to a specialist rehabilitation centre with counselling and treatment. Here they were surprised to meet some boys who also suffered from the same condition. Kayla stayed at the centre for two months. She has slowly eaten her way back to health.

1 What condition do you think Kayla suffered from?

2 What motivated Kayla to lose weight?

3 What foods was Kayla surviving on?

4 Why do you think counselling is part of the treatment?

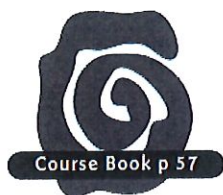
5 Identify the similarities and differences of Kayla's condition to bulimia.

6 Why would it be stereotyping to suggest that eating disorders only happen to girls?

2.4

Literacy

The Australian Dietary Guidelines for Children and Adolescents in Australia



1 Use the words from the Word bank to complete the following.

Encourage and support _____ .

Enjoy a wide _____ of nutritious foods and drink plenty of water.

Children and adolescents should be encouraged to:

- eat plenty of _____ , legumes and fruit
- eat plenty of _____ (including breads, rice, pasta and noodles), preferably _____
- include lean meat, _____ , poultry and/or alternatives
- include _____ , yoghurts, cheeses and/or alternatives
- choose _____ as a drink.

Reduced-fat milks are not suitable for young children under 2 years because of their high _____ needs, but should be encouraged for older children and adolescents. Low fat diets are not suitable for infants.

Care should be taken to:

- limit _____ fat and moderate total fat intake
- choose foods low in _____
- consume only moderate intakes of _____ and foods containing added sugars.

Children and adolescents need sufficient nutritious foods to _____ and develop normally.

_____ should be checked regularly for young children.

_____ activity is important for all children and adolescents.

Care for your child's _____ : prepare and store it _____ .

2 What health problems are the dietary guidelines trying to prevent?

Word bank

cereals
grow
growth
food
sugars
safely
water
milks
breastfeeding
vegetables
growth
salt
variety
fish
energy
saturated
physical
wholegrain

2.5**Hands on**

What's the package telling you?

You need to be wise when examining food packages. A food may claim to be fat-free while the nutrition panel may indicate it is very high in sugar.



Aim

To interpret the information provided on a food package.

Equipment

Packaged food.

Method

Examine a food package and complete the activities.

Results

Product: _____

1 Complete the following table on the product's nutritional information.

Servings per package Serving size	Nutritional information	
	Quantity per serving	Quantity per 100 g
Energy		
Protein		
Fat—total		
—saturated		
Carbohydrates		
—sugars		
Fibre		
Sodium		

2 Tick which claims or symbols appear on the package.

Light

Diet

No added salt

Reduced fat

Low sugar

Reduced salt

% fat free

No added sugars

Low salt

Low fat

High fibre

Glycemic Index

Fat free

Source of fibre

Heart Foundation Tick

Low cholesterol

Fibre added



2.5

continued

- 3 Tick the nutritional value of the product in the table below. Use the daily nutrient requirements for adolescents as a guide.

	Yes	No	Unsure
Low in energy			
A good protein source			
Low in saturated fat			
Low in fat			
A sweet food			
A starchy food			
A salty food			
A good source of fibre			

Approximate daily requirements for adolescents	
Protein	50–70 g (1 g per kg of body weight)
Energy	8 100–13 500 kJ
Sodium	920–2300 mg
Soluble fibre	30–40 g
Saturated fat	15 g
Carbohydrate	50–100 g
Total fat	30–80 g

Note that a low-fat food has less than 3 g of fat per 100 g.

- 4 Write two paragraphs in your workbook answering the following questions.
- When would you use this product?
 - What impact could this product have on health?
 - What improvements could be made to the nutritional value of this product?

2.6

Case study



NORCO Light Prestige ice-creams

The Light Prestige range of ice-creams, made by NORCO, was the first Australian ice-cream to carry the GI symbol. The Glycemic Index ranks the carbohydrates in food from 0–100, based on their immediate effect on blood glucose levels.

A food has a high GI if it is ranked at 70 or more; medium GI if ranged between 56 and 69; and low GI when it's 55 or less. Carbohydrates that are digested quickly and make blood glucose levels rise sharply have a high GI. Low GI carbohydrates give a more gradual rise in blood glucose levels.

The NORCO Light Prestige ice-creams have a low GI ranking. Low GI foods are ideal for people who want to avoid rapid changes in their blood glucose levels, for example pregnant women or anyone who is interested in health and weight control.

1 Highlight the answers to the following questions in the text.

- What is the GI index?
- Why are low GI values preferable to high GI values?
- Who should consume low GI foods?

2 Find these low and high GI foods in the findaword.

High/Medium GI foods

white bread	soft drink
potato	crumpet
cornflakes	bagel
jasmine rice	popcorn
watermelon	jelly beans
parsnip	sugar

T F J F A O L T I U R F W S S W Y
V R E C I R I T A M S A B D E A X
K T U H O B L S S J Y E F A I T X
U N V H R R A E E U C O T E R E V
M V I A G N N L G I G S W R R R K
A X N R A O L F R U A A I B E M L
R H T T D Y Y E L P M L R N H E E
A W L E B T N T L A S E R I C L N
B U J E P I F N E E K L S A N O T
S A A Q M M O O U I R E V R R N I
C N N S X O U M S O D Q S G O O L
S E A A D P O R R I D G E Q C T S
W J Y L N R O C C A R R O T P A M
B Y E L R A B B A G E L N R O T I
A S J C W H I T E B R E A D P O L
T P I N S R A P U E K U Y A H P K

Low GI foods

muesli
basmati rice
legumes
diet yoghurt
fruit loaf
milk
lentils
cherries
sultanas
bran
corn
porridge
carrot
noodles
banana
kumara
barley
pasta
grain breads

2.7

Case study

This is my life!

Complete the Nutritional needs section of the table with words from the Word bank (note that some of these words need to be used more than once). Use your own knowledge or ask family members to help you complete your own history.

Word bank

iron
energy
phosphorus

folate
calcium
vitamin

breast milk
protein
water



Course Book p 60

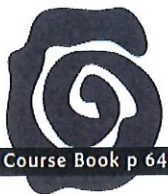
Stage	Nutritional needs	My history
Pregnancy and lactation	<p>_____ for the growth of new tissue. _____ for the formation of bones and teeth. Iron and _____ C and B for the increased blood supply required. _____ to reduce the risk of neural tube defect.</p>	<p>I am the child of _____. My siblings are _____. Substances my mother had to avoid in her pregnancy were _____.</p>
Infancy	<p>_____ _____ for its antibodies and nutrients. _____-giving foods as the baby becomes more active. _____ C and iron around six months.</p>	<p>I was born on (date) _____ at (time) _____ at (venue) _____. I weighed _____. When I was a baby I was fed _____ (breast or formula milk). I crawled at _____ months and walked at _____ months. I got my first tooth at _____ months. The first foods I ate were _____.</p>
Childhood	<p>_____ -giving foods as well as well as foods containing _____ B to release energy. _____ for growth. Calcium and _____ for strengthening bones and teeth. _____ to avoid dehydration.</p>	<p>I started school in (year) _____ at (school) _____. I lost my first tooth when I was _____ years old. A teacher at primary school was _____. Some of the after school activities I was involved in were _____. My favourite foods were _____.</p>
Adolescence	<p>_____ -giving foods. _____ for growth. _____ for strong bones. _____ particularly for girls.</p>	<p>I started high school in (year) _____ at (school) _____. My height is _____ cm. The activities I enjoy include _____. My favourite foods are _____. In the near future I plan to _____.</p>

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2.8

Vocabulary



Food selection

Australians should eat more fruits and vegetables.

Name a fruit or vegetable that starts with each letter of the alphabet. Find at least 20 names.

A	_____
B	_____
C	_____
D	_____
E	_____
F	_____
G	_____
H	_____
I	_____
J	_____
K	_____
L	_____
M	_____
N	_____
O	_____
P	_____
Q	_____
R	_____
S	_____
T	_____
U	_____
V	_____
W	_____
X	_____
Y	_____
Z	_____

2.9

Vocabulary



Food selection

- 1 Highlight which of the following foods is lower in fat and give the reason.

		Reason
French fries	Potato wedges	
Apple pie and cream	Baked apple and ice-cream	
Grilled fish	Battered fish	
Skim milk	Whole milk	
Tuna in oil	Tuna in brine	
Cream-filled biscuit	Plain biscuit	
Pasta with a tomato sauce	Pasta with bacon and cream	
A meat lover's pizza	Margherita pizza (cheese and tomato topping)	

Help these people out!

- 2 Phil has to cut down on his lipid intake. What could he order instead of his favourite fish and chips when dining out?

- 3 Sara is pregnant. Suggest a low-fat, high-calcium lunch suitable for Sara to take to work.

- 4 Christopher and his friends love takeaway fast foods. Suggest a healthy fast food meal.

- 5 Studying makes Michelle want to snack. Suggest some healthy snack choices.

2.10

Hands on



Course Book p 65

Evaluating processed and unprocessed foods

1 Choose one of the following unprocessed foods:

- tomatoes
- corn
- potato
- chicken
- strawberries
- mince meat.

2 Conduct a supermarket survey to find six different types of processed foods that use the unprocessed food as a main ingredient, for example frozen chicken nuggets.

3 List the processed foods.

4 Select one of these products and write down the ingredient list.

Product: _____

Ingredients: _____

5 List the product's nutritional information on the table. Using a nutritional database find the nutritional information about the unprocessed food. Use words such as 'fresh' or 'raw' to refine your search. Complete the table and compare the results.

6 Give reasons why Australians eat a lot of processed foods.

	Processed food per 100 g eg frozen chicken nuggets	Unprocessed per 100 g raw chicken breast
Energy (kJ)		
Protein		
Carbohydrate—total		
Sugars		
Fibre		
Fats—total		

7 What are the advantages and disadvantages of eating processed foods?



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Chapter test



TOTAL

50

Nutrition and consumption

Multiple choice

10

- 1 Which of the following essential nutrients makes up most of our body weight:
 - a lipids
 - b carbohydrates
 - c water
 - d minerals?
- 2 What do carbohydrates break down to after digestion:
 - a glucose
 - b lactose
 - c sucrose
 - d fructose?
- 3 Which of the following essential nutrients does not produce energy:
 - a protein
 - b carbohydrates
 - c lipids
 - d minerals?
- 4 Which of the following is a vitamin:
 - a folate
 - b calcium
 - c sodium
 - d all of the above?
- 5 Which vitamin is mostly found in citrus fruits:
 - a A
 - b B complex
 - c C
 - d D?
- 6 Which food is not a complete protein food:
 - a soy milk
 - b baked beans
 - c fish
 - d soya beans?
- 7 Which of these claims on a label means the food is highest in fat:
 - a reduced fat
 - b fat free
 - c low-fat
 - d diet?
- 8 Which of these claims on a label would mean the product was the lowest in salt:
 - a no added salt
 - b low-salt
 - c reduced salt
 - d light?
- 9 According to the Australian Dietary Guidelines, which of the following milks is not recommended for children under two:
 - a breast milk
 - b reduced fat milk
 - c whole milk
 - d soy milk?
- 10 According to the Australian Dietary Guidelines Australians should eat plenty of:
 - a vegetables and lean meat
 - b cereals and vegetables
 - c milk and cereals
 - d low fat foods and milk.

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2**Chapter test continued****Short answer questions**

- 1 Complete the table.

4

Nutrient	Two functions	Two food sources
Water		
Lipids		

- 2 What is the main function of calcium in the body?

2

- 3 Plan a lunch for school-aged children that includes two calcium-rich foods. Underline the calcium-rich food(s).

2

- 4 Plan a lunch for an adult that includes two fibre-rich foods. Underline the fibre-rich foods.

2

- 5 Identify three problems that may result from a low-fibre diet.

3

- 6 Give an example of a functional food and explain one health benefit of this food.

2

- 7 Give three examples of foods that have increased or decreased in consumption in Australia over the last 50 years.

6

Increased	Decreased

- 8 Give one reason why consumption of processed foods has increased in Australia.

1

- 9 Give examples of how the following factors may influence food selections of a teenager.

6

Factor	Example
Physiology	
Psychology	
Geography	
Social	
Technology	
Economic	

- 10 What do the following symbols mean?

4

a Low GI

b Healthy Heart Foundation Tick

- 11 Using your knowledge of the Healthy Eating Pyramid complete the table below.

8

Eat moderately foods	Eat least foods

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2

Chapter review



Nutrition and consumption.

It is now time to test your successful completion of this chapter. Use the checklist below. Provide relevant information or examples to show that you understand what you have studied.

Students learn to	Information, examples or comments
Explain the role of nutritional components of food in the body.	
Describe the significant role of fibre in the diet.	
Discuss the role of nutritionally modified foods in the diet.	
Discuss current developments in nutritional modification of food.	
Outline conditions of over and under nutrition with reference to at least two diet-related disorders.	
Explore the incidence of and reasons for eating disorders in women and men.	
Describe the nature of anorexia and how it compares with other forms of eating disorders.	
Explore the impact of changes in food consumption patterns to health.	
Outline how a healthy diet can assist in preventing/managing diet-related disorders.	
Identify broad guidelines for healthy eating to promote optimal health and prevent disease.	
Analyse the nutritive content of food using electronic databases.	
Discuss the value to the customer of endorsed labelling symbols.	
Outline the special nutritive requirements at different stages of the lifecycle for both females and males.	



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2	Chapter review <i>continued</i>
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Design, plan and prepare balanced diets for various stages of the lifecycle.	
Conduct an advanced web search to identify trends in food consumption.	
Tabulate data using a spreadsheet and generate graphs for analysis.	

List the activities and information that you enjoyed the most in this unit.

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Identify areas for improvement where more revision or research are required for you to completely understand the topic.

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