Health and Human Development

Unit 1 AOS 2- Health and Nutrition

Topic 4- Nutrition and Youth health and well-being

FIGURE 4.1 Young people’s eating habits are often influenced by social media.

BOOKLET 4

Name:
1. What are nutrients?

____________________________________________________________________________________________________________________
____________________________________________________________________________________________________________________
____________________________________________________________________________________________________________________

2. List the 6 categories

____________________________________________________________________________________________________________________

3. What are macronutrients and micronutrients?

____________________________________________________________________________________________________________________
____________________________________________________________________________________________________________________
____________________________________________________________________________________________________________________
____________________________________________________________________________________________________________________

4. What is the unit of measurement for energy in Australia?

____________________________________________________________________________________________________________________

5. Which nutrients contain energy and how much energy does each gram of each nutrient contain?

____________________________________________________________________________________________________________________
____________________________________________________________________________________________________________________
____________________________________________________________________________________________________________________
____________________________________________________________________________________________________________________

6. Which nutrient is the body’s preferred source of energy?

____________________________________________________________________________________________________________________
# Macronutrients Table

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Function for Health and Wellbeing</th>
<th>Food Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbohydrates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dietary Fibre</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lipids (fats)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protein</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Water** - What role does water play in the functioning of the body and how much should we be consuming each day?

**Glycaemic Index (GI)**

Describe what the Glycaemic Index is and what the graph is showing.
# Micronutrients Table - Minerals

<table>
<thead>
<tr>
<th>NUTRIENT</th>
<th>FUNCTION FOR HEALTH AND WELLBEING</th>
<th>FOOD SOURCES</th>
<th>ABSORPTION</th>
<th>DEFICIENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iodine</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluoride</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phosphorus</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Micronutrients Table - Vitamins

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Function for Health and Wellbeing</th>
<th>Food Sources</th>
<th>Deficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitamin A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(fat soluble)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vitamin D</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(fat soluble)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vitamin C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(water soluble)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Folate – B9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(water soluble)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vitamin B12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(water soluble)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Food selection models

1. Which level of government is responsible for creating the Australian Guide to Healthy Eating?

2. Label the following diagram using your textbook pg 96
3. Briefly describe the Health Star Rating System using page 97 of your text book

![Health Star Rating System](image)

**FIGURE 4.27** The nutrients analysed as part of the Health Star Rating System

HEALTH STAR RATINGS range from 1.0 to 5 stars. Compare similar packaged foods: the more stars, the healthier the choice.

3.5

HEALTH STAR RATING

RISK NUTRIENTS: saturated fat, sodium (salt) and sugars. These are linked to increased rates of obesity and chronic disease if consumed in excess of recommended guidelines.

ENERGY: 1020kJ 1.0g
SALT: 45mg 8.0g
SUGARS: 2.1g LOW
FIBRE: 8.0g HIGH

PROTECTIVE NUTRIENTS such as dietary fibre, protein, calcium, or certain vitamins and minerals.

4. Draw the Healthy Eating Pyramid using the following template:
Dietary Analysis

Record everything you eat over a 24-hour period in the table below

<table>
<thead>
<tr>
<th>Breakfast</th>
<th>Snacks</th>
<th>Dinner</th>
<th>Snacks</th>
<th>Dinner</th>
<th>Snacks</th>
</tr>
</thead>
</table>

(a) Was your diet over the past 24 hours consistent with the proportions suggested by the Australian Guide to Healthy Eating or the Healthy Eating Pyramid?
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________

(b) Did you have any difficulties completing this activity? Why or why not?
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________

(c) Prepare an analysis of your intake. Be sure to include the following:
(i) Were you eating mainly grains and vegetables?
(ii) Did you consume any foods from both the dairy and meat groups?
(iii) Were there any food groups which you do not consume the adequate proportions as reflected in the Australian Guide to Healthy Eating or the Healthy Eating Pyramid?
(iv) Discuss the possible short- and long-term consequences of your diet if it continued over time.
(v) Suggest changes that could be made to minimise the risk of any short- or long-term consequences identified in part iv.
(d) Discuss any difficulties you had in classifying each food item into the five food groups and explain how these challenges could be overcome
Mind Map  Produce your own mind map the outlines the consequences of nutritional imbalance. Use the five sub-headings on pages 103-104.
HALF of babies from poor Australian families are consuming sugary drinks, like fruit juice, fizzy drinks and cordial before their first birthday, increasing their risk of obesity.

A study of 300 children found they were also twice as likely to be given savoury snacks than those from wealthier backgrounds.

Melbourne researchers were shocked at the alarming number of babies drinking sugary drinks when they should be having only milk or water. Children’s taste preferences and their dietary habits are established at an early age. Those who are overweight when they are young are likely to be overweight as adults. Deakin University lead researcher Alexandra Chung said they also found a quarter of children from wealthier families drank sweet beverages. In families from poor backgrounds, two-thirds of children had a sugary drink in the 24 hours before the study.

"The huge difference in sweet drink consumption in the first year of life between the two groups was the most alarming finding, Ms Chung said. "Children under one should not have any sweet drinks." for older children, the dietary guidelines recommend only half a cup of fruit juice as an occasional drink. They also found 70 per cent of all children ate cakes, sweet biscuits and doughnuts when they were two or three years old. 'But when we looked at savoury snacks like pies, sausage rolls and chips, we found Kids from poorer families were consuming more of those foods at all ages," Ms Chung said.

One in three children from poor families were overweight or obese at age 10 or 11 compared with one in six for wealthy families. The higher rate of sweet drink and savoury food consumption was to blame for 11 per cent of the weight disparity between rich and poor families.

Ms Chung said changes to food labelling, reducing junk food marketing aimed at children and policies that encour-aged drinking water, such as a tax on sugary drinks, could help parents. Mother of three Ali Callinan has a simple approach to limiting the amount of junk food her children Maggie, 5, Paddy, 9, and Emily, 11 eat 'We just don’t have it in the house and it removes the temptation”, she said.

She also teaches her children that sugary drinks and cake are for special occasions.
Article Analatwist!- (You are the teacher..........)

1. Read the above article on “Our Sweet Junkies” and create three questions that relate to the article.
2. Then exchange it with someone or do a three-way swap and answer their questions.
3. When you have got the answers to the questions you created, you need to grade them and give feedback!

Name of person answering the questions

Question and Answer 1:
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Question and Answer 2:
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
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________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Question and Answer 3:
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Food policies have a large impact on many parts of the food industry in Australia. Factors such as the cost of food can have potential influences on food selection. Food laws and trade arrangements also affect the availability of food within a country. An example of a current food policy is the implementation of health-related food taxes. Some groups in Australia argue that a tax should be imposed on sugary drinks, with the aim of decreasing the consumption of such products by making them less affordable and therefore reducing rising rates of obesity. Similar taxes have already been implemented in many countries, such as France, the UK and some states of the United States.

1. Read through the case study **A sugary drinks tax could recoup some of the costs of obesity while preventing it** on page 119 and answer the questions from pg 120 in the space provided below (Make sure you incorporate the question into the answer).

1) ______________________________________________________________________

2) ______________________________________________________________________

3) ______________________________________________________________________

4) ______________________________________________________________________

5) ______________________________________________________________________

6) R- _____________________________________________________________

   E-___________________________________________________________

   A-___________________________________________________________

   L-___________________________________________________________
Food policies and laws and trade arrangements
Food policies have a large impact on many parts of the food industry in Australia. Factors such as the cost of food can have potential influences on food selection. Food laws and trade arrangements also affect the availability of food within a country. An example of a current food policy is the implementation of health-related food taxes. Some groups in Australia argue that a tax should be imposed on sugary drinks, with the aim of decreasing the consumption of such products by making them less affordable and therefore reducing rising rates of obesity. Similar taxes have already been implemented in many countries, such as France, the UK and some states of the United States.

2. Read through the case study Do sports drinks fuel or fool young athletes? On page 82 and answer the questions in space provided below (make sure you incorporate the questions into the answer).

1)  

2)  

3)  

4) How does this article relate to Food policies and laws and trade arrangements?
Part B: Food Labelling Analysis

Food labelling

Food labelling laws determine what a consumer knows about the product they are purchasing. This information will often then influence the choices of food that are available and the impacts on individual diets. Food labelling can be confusing for young people if they are unfamiliar with reading and comprehending the information. The main focus is to try to reduce the selection of products which have added salt and sugar, and those that are high in saturated or trans fats.

Go to the web page below and answer the following questions

1. Why should you always refer to the 100g column?

_____________________________________________________________________
_____________________________________________________________________

2. What are the recommended grams/milligrams of the following nutrients?
   • Fat- _______________________________________________________________
   • Sugar- _____________________________________________________________
   • Fibre- _____________________________________________________________
   • Salt/sodium- _______________________________________________________

3. What does the ingredients list tell us and how do we interpret it?

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
4. Nutrition claims - What do they really mean?

Fill in the table below that explains what the following nutrition terms mean.

<table>
<thead>
<tr>
<th>Nutrient Claim</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced Fat</td>
<td></td>
</tr>
<tr>
<td>% Fat Free</td>
<td></td>
</tr>
<tr>
<td>Cholesterol Free</td>
<td></td>
</tr>
<tr>
<td>“Light” or “Lite”</td>
<td></td>
</tr>
<tr>
<td>No added sugar</td>
<td></td>
</tr>
<tr>
<td>“Diet”</td>
<td></td>
</tr>
<tr>
<td>Source of Fibre</td>
<td></td>
</tr>
<tr>
<td>High in Fibre</td>
<td></td>
</tr>
</tbody>
</table>

5. Explain the difference between “Use By” and “Used By” -
_____________________________________________________________________
_____________________________________________________________________

6. Supermarket Analysis -

You may do this in pairs or three- **HOWEVER**! You must submit your own analysis with pictures etc

- Select 3 similar products eg. 3 x breakfast cereals, yoghurts, muesli bars, chips etc
- Take a photo of each product and its panel
- Compare the nutritional information panels on all three products and present this as an analysis that includes the following information

a) Do any of them meet the recommended guidelines from question 2? Why/why not? Explain using numbers
b) List them in order from healthiest to unhealthiest and provide reasoning.
c) Would any or all of these products be considered a “Healthy” food option? Explain
d) Would you personally purchase any of these products? Why?
e) Has this analysis made you change your perception of these products? Explain
f) Has this analysis made you change the way you will look at products? Explain
Extension:

1. The following table shows the typical food intake of Katie (a 17-year-old female) compared with the recommended number of serves for someone her age:

<table>
<thead>
<tr>
<th></th>
<th>Vegetables and legume/beans</th>
<th>Grain (cereal) foods</th>
<th>Lean meats, poultry, fish, eggs, tofu, nuts and seeds, and legumes/beans</th>
<th>Milk, yoghurt, cheese and/or alternatives</th>
<th>Unsaturated spreads and oils</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended number of serves from Dietary Guidelines</td>
<td>5</td>
<td>2</td>
<td>7</td>
<td>2½</td>
<td>3½</td>
</tr>
<tr>
<td>Katie's typical intake</td>
<td>5</td>
<td>1</td>
<td>7</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

a) Identify the food groups which Katie is consuming in insufficient amounts
__________________________________________________________________________  
__________________________________________________________________________

b) Discuss two possible short- and/or long-term consequences on Katie’s health and wellbeing if she continues to consume insufficient amounts of two of the food groups identified question 1
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

__________________________________________________________________________


c) Identify the food groups which Katie is consuming in excess amounts
__________________________________________________________________________


d) Discuss two possible short- and/or long-term consequences on Katie’s health and wellbeing if she continues to consume excess amounts of the foods groups identified in question 3
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

__________________________________________________________________________
2. In order to analyse the effectiveness of the food-selection models and other tools, it is a good idea to complete a table with their advantages and disadvantages or strengths and weaknesses of each model and then these examples can be applied to different situations:

a) Fill in the table below

<table>
<thead>
<tr>
<th>Food-selection model/tool</th>
<th>Advantages/strengths</th>
<th>Disadvantages/weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian Guide to Healthy Eating</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Healthy Eating Pyramid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Star Rating Program</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

b) Jackie is 14 and has just become a vegetarian. Identify one food-selection model and explain how it could assist Jackie in consuming foods that will provide her with the nutrients she needs to maintain optimal health and wellbeing.

Food-Selection Model -
Explanation___________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

b) Jackie is 14 and has just become a vegetarian. Identify one food-selection model and explain how it could assist Jackie in consuming foods that will provide her with the nutrients she needs to maintain optimal health and wellbeing.

Food-Selection Model -
Explanation___________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

b) Jackie is 14 and has just become a vegetarian. Identify one food-selection model and explain how it could assist Jackie in consuming foods that will provide her with the nutrients she needs to maintain optimal health and wellbeing.

Food-Selection Model -
Explanation___________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

3. Read through the information on page 127 (underneath Key Skill) and 128 that assists you to interpret information and answer questions. Then read through the case study on page 128 (underneath Practice the Key Skill) about Mary and answer the following question.

Discuss the range of different factors that have interacted to have an impact on the food intake of Mary and her friends.
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Exam Preparation:

1. The federal government’s Health Star Rating Program places stars on food products based on the nutrition contribution of the product. They market the program by saying ‘the more stars the better’, on individual products. The products are given star ratings on individual nutrients and not whole foods, and most fruits and vegetables do not come in a packet.
   - Explain a limitation of this statement ‘the more stars the better’. (A product can reach a maximum of 5 stars.) (2 marks)

2. Charlie is an active 16-year-old boy. Below is a typical breakdown of the amount of foods he consumes daily, in comparison to the recommended amounts from the Australian Dietary Guidelines.

<table>
<thead>
<tr>
<th></th>
<th>Vegetables and legume/beans</th>
<th>Fruit</th>
<th>Grain (cereal) foods</th>
<th>Lean meats, poultry, fish, eggs, tofu, nuts and seeds, and legumes/beans</th>
<th>Milk, yoghurt, cheese and/or alternatives</th>
<th>Unsaturated spreads and oils</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended number of serves from Australian Dietary Guidelines</td>
<td>5</td>
<td>2</td>
<td>7</td>
<td>2½</td>
<td>3½</td>
<td>2</td>
</tr>
<tr>
<td>Charlie’s typical intake</td>
<td>3</td>
<td>1</td>
<td>8</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

(a) Which food groups is Charlie over-consuming? (2 marks)

(b) Which food groups is Charlie under-consuming? (4 marks)

(c) Explain two short-term consequences for Charlie’s health and wellbeing if he continues this diet. (2 marks)
(d) Explain two long-term consequences for Charlie’s health and wellbeing if he continues this diet. (2 marks)

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

(e) Identify two ways that Charlie could use the Australian Guide to Healthy Eating to assist him to consume a more balanced diet. (2 marks)

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

(f) Identify two limitations Charlie may find in using this guide to assist him with his food selection. (2 marks)

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
**Assessment Checklist**

Gemma Dellamina | HHD unit 1 | outcome 2 topic 4

Each task will be given a due date that you will need to fill in.

When each assessment piece has been completed tick it off in the box below.

Once it has been corrected I will initial it.

When the booklet is completed it will need to be handed in (this may happen throughout the topic)

<table>
<thead>
<tr>
<th>TASK</th>
<th>DUE DATE</th>
<th>DONE</th>
<th>INITIALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutrients Table</td>
<td></td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>Food Selection Models</td>
<td></td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>Dietary Analysis</td>
<td></td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>Mind Map</td>
<td></td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>Article Analysis</td>
<td></td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>Case Study Food Labeling Analysis</td>
<td></td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>Extension</td>
<td></td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>Exam Revision</td>
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</tbody>
</table>