

Worksheet and Case Study Assignment

OCR Level 3 Certificate in Personal Training

Unit 7 – Applying the principals of nutrition as part of a personal training programme

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2 Guidance for Centres

- OCR's assessments for this unit are available to download free of charge from our website: www.ocr.org.uk
- These assessments have been designed to meet the full requirements of the unit and cover all assessment criteria.
- Learners should take part in a planned learning programme that covers the underpinning knowledge and skills of the qualification.
- Learners should be allowed sufficient time to complete all of the assessment activities. The amount of time may vary depending on the nature of the assessment activities and the ability of individual learners.
- Each learner must produce individual and authentic evidence for each question within the assessment.
- Centre staff may give support and guidance to learners. This support and guidance should focus on checking that learners understand what is expected of them. It is not acceptable for tutors to provide model answers or to work through answers in detail.
- Tutors should give feedback to learners to support and guide them in producing evidence to the required standard.
- Learners may use information from any relevant source to help them with producing evidence for the assessment activities.
- Learners must be guided on the use of information from other sources to ensure that confidentiality is maintained at all times.
- Learners may continue answers on separate paper or type their responses if they wish.
- To assist in the assessment of learners' work, centres can use the assessment guidance for this unit provided by OCR which is available to download from the OCR website.
- Assessors' decisions should be quality assured across the centre through internal moderation. For further information about internal moderation please refer to the section on Assessment and Moderation in the Centre Handbook.

3 Unit 7 Assessment - Part 1 Worksheet

Learning Outcome 1 - Understand the principles of nutrition

1 What are the main enzymes involved in the digestion of:

Nutrient	Enzyme
Carbohydrate	
Protein	
Fat	

2 What is the function of dietary fibre?

3 How would you explain the meaning of the term “balanced diet” to a client?

4 Complete the following table identifying:

- The three macronutrients
- The main function of each macronutrient
- A minimum of two good/main sources of each macronutrient
- The calorific value (kcal) of 1g each macro nutrient

Macronutrient	Main function	Source	Calorific value

5 What are micronutrients and what is their function?

6 Explain **three** cooking/serving methods that would reduce the fat content of meals.

1

2

3

7 What are dietary reference values?

8 The Eatwell Plate divides food into **five** main food groups.
Each group supplies the body with different combinations of nutrients.

Complete the table below listing the food groups and giving one example of a nutrient supplied by that food group.

Food Group	Main nutrients

9 How does LDL cholesterol increase the risk of CHD?

10 Why is HDL known as good cholesterol?

11 Using the food label below state whether the statements below are **true or false**.

- a) A 350g serving of this product would provide a man with 25% of their guideline daily calorie intake.
- b) Over 30% of the calories in a 350g serving of this product come from/are derived from carbohydrate.
- c) Over 50% of the fat in a 350g serving of this product is saturated fat.
- d) A 350g serving of this product contains nearly half the guideline daily amount of salt for an adult.

Nutrition Information		
Typical Values	Per 100g	Per 350g serving
Energy-kj	480kj	1680kj
-kcal (calories)	115kcal	405kcal
Protein	9.5g	33.3g
Carbohydrate	8.6g	30.1g
Of which sugars	2.0g	7.0g
Fat	4.6g	16.1g
Of which saturates	3.0g	10.0g
Fibre	1.5g	5.3g
Sodium*	0.3g	1.1g
*Equivalent as salt	0.8g	2.8g

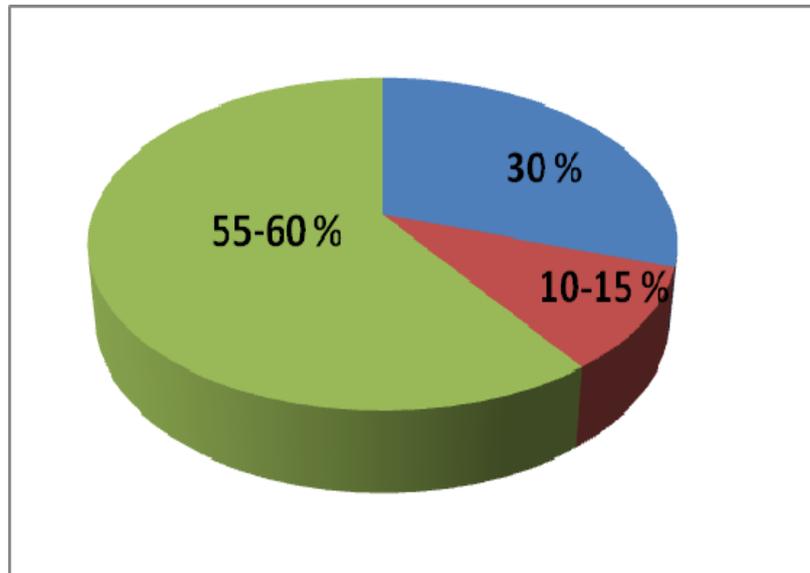
Learning Outcome 2 - Understand Key Guidelines in relation to nutrition

1 List **two** professionals involved in the area of nutrition (who you may wish to consult when working as a personal trainer)

2 The pie chart below represents the dietary guidelines (percentage of energy/calories that should come from) for the three macronutrients.

Complete the table stating which percentage relates to which macronutrient.

Area of Chart	Name of macronutrient
	
	
	



3 Identify and explain **four** healthy eating guidelines that will help individuals achieve a balanced diet.

1 _____

2 _____

3 _____

4 _____

4 If an individual eats

- 1 medium banana with their cereal
- 1 handful of grapes for a mid morning snack
- 1 glass of unsweetened orange juice
- 1 small salad with their lunch
- 3 tablespoons of carrots and 3 tablespoons of peas with their main meal

i) How many portions of fruit and vegetables would this individual be having?

ii) Would they be meeting the recommended guidelines?

5 List **three** organisations that would provide you with reliable/accurate nutritional information (that you could use to support your clients goals).

1 _____

2 _____

3 _____

6 State whether the statements below are **true or false**.

Statement	True or False
The Traffic Light Labelling scheme is an evidenced based method means of providing “at a glance” nutritional information to consumers.	
A product with a “reduced fat” label on is always a low in fat	
A food that has no added sugar may still contain sugar	

Learning Outcome 3 - Understand nationally recommended practice in relation to providing nutritional advice.

1 Part of your role is to know when to refer clients to other health professionals. Identify **three** situations when you should refer your client to a dietician.

1 _____

2 _____

3 _____

2 If a client asks your thoughts on a new weight loss fad that involves excluding one or more of the key food groups, what is it important that you explain to them?

3 Explain two negative effects of severe energy restriction on a clients health and/or performance.

4 Which of the following individuals may be at risk of a nutritional deficiency?

- a) An individual following the Atkins diet
- b) An individual following a severely energy restricted diet
- c) An individual following a high calorie diet based on starchy and fatty foods
- d) All of the above

5 Consider **one** ethnic minority/religious group (e.g. Muslims, Sikhs or Hindus). What religious practices would you need to consider if you were offering nutritional advice to this group?

6 Explain **three** health consequences of long term use of a high protein diet.

1 _____

2 _____

3 _____

7 Identify **two** groups of people may need to take vitamin and mineral supplements?

1 _____

2 _____

8 Why should you never agree to conduct a complex analysis of your client's diet and recommend major dietary changes?

Learning Outcome 4 - Understand the relationship between nutrition and physical activity

1 What energy system is used when performing sustained activity (e.g. swimming running) and what fuel/s does this energy system require?

2 What is the Energy Balance equation and what does it explain?

- 3 Using the tables below calculate the Basal Metabolic Rate (BMR) for a 33 year old man who is 1.9m tall and who weighs 135kg.

BMR:

Males BMR		
Age (yrs)	kcal/day	MJ/day
10-17	17.7W + 657	0.074W + 2.754
18-29	15.1W + 692	0.063W + 2.896
30-59	11.5W + 873	0.048W + 3.653
60-74	11.9W + 700	0.0499W + 2.930
75+	8.4W + 821	0.0350W + 3.434

Females BMR		
Age (yrs)	kcal/day	MJ/day
10-17	13.4W + 692	0.056W + 2.898
18-29	14.8W + 487	0.062W + 2.036
30-59	8.3W + 846	0.034W + 3.538
60-74	9.2W + 687	0.0386W + 2.875
75+	9.8W + 624	0.041W + 2.610

(where W = body weight measured in kg)

Modified Schofield equations (Department of Health, 1991)

- 4 What is his total energy requirement if he is moderately active?

Total Energy Requirement:

Population group	PAL
Inactive men and women	1.4
Moderately active women	1.6
Moderately active men	1.7
Highly active women	1.8
Highly active men	1.9

(Department of Health, 1991)

5 Using the table below, calculate how many a calories a 65kg individual would use if they:

a) Cycled for 30 minutes at a moderate pace

b) Walked briskly for 1 hour

Based on a 65kg individual the number of calories expended per minute are

Activity	Kcal/min
Leisure cycling	6.5
Brisk walking	6.0
High intensity aerobics	7.5

6 What is the benefit of carbohydrate loading and how is it achieved?

Learning Outcome 5 - Understand how to collect information relating to nutrition

1 Before collecting nutritional information what must you ensure you have:

a) Explained to the client?

b) Obtained from the client?

2 List **six** pieces of information you should collect from clients before offering them nutritional advice.

1 _____

2 _____

3 _____

4 _____

5 _____

6 _____

Learning Outcome 6 - Understand how to use nutritional information

1 Describe **two** methods can you use to collect information about a client's diet?

1 _____

2 _____

2 Calculate the BMI of a 33 year old man who is 1.9m tall and who weighs 133kg.

3 Would he be classified as underweight, normal weight, overweight or obese?

4 Complete the gaps in the sentence below:

Males with a waist circumference of more than _____ **cm or** _____ **inches** and females with a waist circumference of more than _____ **cm or** _____ **inches** are at increased health risk.

5 List **three** physical signs that an individual is suffering from anorexia nervosa in addition to severe weight loss.

1 _____

2 _____

3 _____

6 **Describe THREE key messages included in the** industry guidance note on 'Managing users with suspected eating disorders'.

1 _____

2 _____

3 _____

Learning Outcome 7 - Understand the principles of nutritional goal setting with clients

1 Describe **THREE** common barriers to healthy eating (7.5)

1 _____

2 _____

3 _____

2 If someone is in the contemplation stage of behaviour change, what would be the best course of action/strategy to employ:

- a) Provide them with information about the benefits of eating healthily
- b) Ask them to set nutritional goals with you
- c) Suggest that they attend a healthy cooking course

Worksheet Feedback

Learner Signature:

Date:.....

Assessor Comments:

Assessor Signature:

Date:

IV Signature:

Date:

4 Unit 7 Assessment - Part 2 Case Study

Nutrition Case Study

For this case study learners should identify a client. This could be a friend or family member or a fellow learner. It is recommended the client selected requires sufficient nutritional advice to enable the learner to meet the case study criteria and not someone who is already following a diet or healthy eating plan

The client selected should also not require any nutritional intervention from a doctor or dietician (i.e. should not have a clinical condition such as diabetes or be suffering from an eating disorder). Learners must ensure that they have the client's permission to use their personal information in the completion of their case study. A template permission form is provided on page 25.

This case study will require the learners to demonstrate their ability to collect, record and analyse nutritional information from their client and apply this information to set nutritional goals with/for the client that are based on accepted good practice and national guidelines.

The case study will require learners to:

- Collect and record relevant information/the information needed about clients in an approved format that will enable them to create a nutritional profile of the client
- Analyse the client's nutritional profile
- Design and agree SMART nutritional goals with the client taking their nutritional profile into account
- Based on accepted good practice and guidelines provide nutritional advice for clients to help them achieve their goals
- Use credible sources of educational information to support clients to achieve these goals
- Agree review points with clients
- Monitor, evaluate and review the clients progress towards their goals

A comprehensive form which covers all of the assessment criteria for this unit is provided and starts on page 31 Suggested instructions and templates for a food diary are provided on pages 26 – 30 which learners may choose to use if they want to.

Case Study Assessment Summary

<p>Nutrition Case Study Assessment Summary This summary form is provided to help assessors with the assessment of learners' case studies. It also provides an outline of all the stages of the assessment against the relevant assessment criteria for the unit.</p>	
	Achieved
<p>Section 1: Client's Personal Details (8.1)</p> <p>1 Collect and record the following information about your client</p> <ul style="list-style-type: none"> • Age • Gender • Height • Weight • BMI: (Family Status) • Occupation • Hobbies 	
<p>Section 2: Client's Nutritional Profile (8.1)</p> <p>1 Ask your client to record everything they eat and drink in a food diary for three days (it is not necessary for them to weigh all their food but they should provide an indication of portion sizes).</p> <p><i>The food diaries should be kept with the case study within learners' portfolios. Suggested instructions and templates for a food diary are provided on pages 26 – 30.</i></p> <p>2 Identify and record which foods your client likes and dislikes (8.1)</p>	
<p>Section 3: Nutritional information/profile analysis (8.3)</p> <p>1 Following discussion with the client, choose the day they feel best represents their usual diet. Use this food diary entry to analyse your clients current eating habits in relation to the Eatwell plate guidelines (8.3)</p> <p>You should include a summary of your clients intake of the 5 food groups</p>	
<p>Section 4: Nutritional goal setting (9.2)</p> <p>1 Ask your client what they would like to achieve (eg to eat more fruit and vegetables)</p> <p>2 Identify your client's motivation to change their eating habits and any barriers that might prevent them from achieving their goals (7.5, 7.6)</p> <p>3 Explain how you will motivate the client and help them overcome their barriers (7.5, 7.6)</p> <p>4 Taking this into account, work with your client to set (short, medium and long term) SMART goals/targets that are compatible with their profile and with accepted good practice and will enable them to achieve their overall goal (9.2)</p> <p>5 Agree with the client and record when and how their progress will be reviewed and monitored (9.4)</p>	

<p>Section 5: Nutritional advice and implementation (9.3?)</p> <ol style="list-style-type: none"> 1 Identify a minimum of THREE changes that you would suggest that your client makes to help them achieve their goals (e.g. what food groups do you think your client needs to eat more or less of) 2 Explain why you think these changes would be beneficial 3 Explain how your client should/could put these changes into practice/ how they should incorporate this dietary advice into his diet 4 Include TWO examples of educational information/ resources that you will use with your client and explain how you are going to use them (e.g. information about 5 a day) (9.1) 	
<p>Section 6: Nutritional goal review and evaluation (9.6)</p> <ol style="list-style-type: none"> 1 Ask your client to complete another food diary for three days. This food diary should be submitted with your case study 2 Analyse your clients current eating habits in relation to the Eatwell plate guidelines (8.3) and to their agreed review points (refer to section 4) 3 Ask your client how they feel they are progressing towards the agreed goals? 4 Based on your analysis and your client’s feedback summarise how your client is progressing towards their goals (are any modifications necessary?) 5 List any modifications/additional advice that you feel is necessary 6 Complete the final evaluation questions. 	
<p>Nutrition Case Study Assessor Feedback:</p>	

Informed Consent Form

Informed Consent Form to act as Case Study

Applying the principles of nutrition as part of a personal training programme

Exercise instructors completing the unit 'Applying the principles of nutrition as part of a personal training programme' are required to undertake a case study with a client whom they have worked with.

Individuals who agree to act as case studies are asked to give their permission that the information provided to the exercise instructor may be included in the case study. If you agree to become a subject for a case study, your name will not be used on the work submitted by the exercise instructor.

Individuals must also confirm that they do not require and are not currently receiving any nutritional intervention from a doctor or dietician (i.e. they do not have a clinical condition such as diabetes or be suffering from an eating disorder) as it is outside the boundaries of the exercise instructor's role to offer nutritional advice to such individuals.

Equipping exercise instructors with the knowledge and skills to provide consistent nutritional advice has been recognised as an important means of educating people about healthy eating recommendations. For this reason it will be greatly appreciated if you agree to act as a subject for a case study.

Client Consent:

I (insert name of client) _____ agree to my details being included in a written case study for the purposes of exercise instructor training and confirm that I do not require and am not currently receiving any nutritional intervention from a doctor or dietician.

Signature of Client: _____ Date: _____

Signature of Student/Instructor: _____ Date: _____

Food Diary Templates

Food Diary Instructions

Guidelines for keeping a food diary:

- Write down everything you eat and drink during the day
- Record everything as soon as its consumed, so that you don't forget anything
- Try to record quantities eaten, even rough household measures will be useful (bowl, plate, teaspoon and so on)
- Record honestly, don't change your usual intake
- Record over several days, your diet may be quite different at weekends for example
- Record the times you eat, this may help to identify your trigger items for snacking
- How do you feel when you eat? What feelings cause you to start eating?
- Emotions are often potent triggers – boredom, sadness, recording those will also help you to identify your triggers

Food Diary

Use this diary to record what you have to eat and drink every day for a week/3 days/5 days (delete as appropriate).

Meal	Time	Food and drink consumed
Breakfast		
Mid-morning		
Lunch		
Mid-afternoon		
Dinner		
Supper		
Other snacks and drinks		

Food Diary

Use this diary to record what you have to eat and drink every day for a week/3 days/5 days (delete as appropriate) and how you felt at the time.

Meal	Time	Food and drink consumed	How did you feel at the time? (bored, tired, upset, stressed)
Breakfast			
Mid-morning			
Lunch			
Mid-afternoon			
Dinner			
Supper			
Other snacks and drinks			

Food Diary

Use this diary to record what you have to eat and drink every day for a week/3 days/5 days (delete as appropriate).

Time	Food and drink consumed

Food Diary

Use this diary to record what you have to eat and drink every day for a week/3 days/5 days (delete as appropriate) and how you felt at the time.

Time	Food and drink consumed	How did you feel at the time? (bored, tired, upset, stressed)

Nutrition Case Study Assessment

Section 1: Client's Personal Details (8.1)		
Collect and record the following information about your client		
Age:	Height:	
Gender:	Weight:	
	BMI:	
Describe your client's family status, their occupation and their main hobbies/pastimes		
Section 2: Client's Nutritional Profile (8.1)		
Identify your clients current eating patterns by asking them to complete a three day food diary which should be attached to your case study (an example food diary and guidelines are included in the unit paperwork)		
Which foods does your client like and dislike? (8.1)		
Food Likes	Food Dislikes	
Section 3: Nutritional information/profile analysis (8.3)		
Following discussion with the client, choose the day they feel best represent s their usual diet. Use this food diary entry to analyse your clients current eating habits in relation to the Eatwell plate guidelines using the table below (8.3)		
Food Group		Quantity

Which food groups is your client eating too much of?
Which food groups is your client not eating enough of?
Section 4: Nutritional goal setting (9.2)
What does your client want to achieve (e.g. to eat more fruit and vegetables)?
How motivated is your client to change their eating habits? (7.5, 7.6)
What barriers might prevent them from achieving their goals? (7.5, 7.6)
Explain how you will motivate the client and help them overcome their barriers (7.5, 7.6)

Taking the information you have collected into account, work with your client to set (short, medium and long term) SMART goals/targets that are compatible with their profile and with accepted good practice and will enable them to achieve their overall goal.

You should also list any actions that are required to enable the client to achieve their goal (9.2)

You may continue on a separate piece of paper or attach a separate sheet if you prefer to have more space.

SMART Goal	Action required	Target date	Review date/comments
Short			
Medium			
Long			

How is your client going to monitor their progress and how are you going to monitor their progress?

Section 5: Nutritional advice and implementation (9.3)

Identify a minimum of THREE changes that you would suggest that your client makes to help them achieve their goals (e.g. what food groups do you think your client needs to eat more or less of)

Explain why you think these changes would be beneficial.

Explain how your client should/could put these changes into practice/ how they should incorporate this dietary advice into his diet.

Record this information in the table below. You may continue on a separate piece of paper or attach a separate sheet if you prefer to have more space.

Dietary Change	What are the benefits?	How can the client put these changes into practice?
1		
2		
3		

List TWO examples of educational information/ resources that you will use with your client and explain how you are going to use them (e.g. information about 5 a day) (9.1)

Section 6: Nutritional goal review and evaluation (9.6)
Ask your client to complete another food diary for three days. This food diary should be attached to your case study
Analyse your clients current eating habits in relation to the Eatwell plate guidelines (8.3) and to their agreed review points (refer to section 4)
How does your client feel they are progressing towards the agreed goals?
Based on your analysis and your client's feedback summarise how your client is progressing towards their goals (are any modifications necessary?)

Review/Evaluation Questions

What type of information may your client be sensitive about telling you and how are you going to ease their concerns?

How did you/would you sensitively explain to their client that they were consuming excessive amounts of certain food groups/that their diet was not well balanced?

What might your client say or what might you notice when analysing their nutritional information that would indicate they needed to be referred to a dietician?
