

LEVEL 3 PERSONAL TRAINING COURSE



Nutrition for Performance, Health & Fitness



Aim and purpose

The aim of this unit is to provide a broad understanding of the importance of nutrition and hydration to a variety of sports participants.

Learning outcomes

On completion of this unit a learner should be able to:

- Describe the structure & function of selected organs of the digestive system
- Define terminology common in sport nutrition
- Describe and explain the main macronutrients & micronutrients, their sources, function and calorie value
- Explain common terminology related to nutrition
- Demonstrate an understanding of & evaluate healthy-living guidelines and sources of nutritional information
- Demonstrate an understanding of the roles and expectations of training professionals
- Apply concepts of nutrition for training & performance
- Know how to consult & gather information when assessing & providing nutritional advice
- Construct, analyse & evaluate a diet plan for a specific case study

Assessment Brief IQA by:	
Ian Spiby - Education Director (Wellbeing Fitness)	Date: 1/11/2019

Assessment Brief sampled by Lead IQA:	
Ian Spiby - Education Director (Wellbeing Fitness)	Date: 1/11/2019

Learner submission sampled by IQA: Name: <input style="width: 400px;" type="text"/>	
<input style="width: 95%;" type="text"/>	Date: <input style="width: 100px;" type="text"/>

Learner submission sampled by Lead IQA: Name: <input style="width: 400px;" type="text"/>	
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DIGESTIVE SYSTEM

Describe 5 of the organs involved with the digestive system; include structure and functions of these organs.

No. 1	Name of organ:



No. 2	Name of organ:

No. 3	Name of organ:



No. 4	Name of organ:

No. 5	Name of organ:

KEY NUTRITIONAL TERMINOLOGY

Provide an explanation of the following terms.

TERM	EXPLANATION
Healthy Eating	
Nutrition	
Diet	
Balanced Diet	

Carbohydrates: Provide the following:

1) Describe the function

2) Digestion

3) Source

4) Identify calorific value

Protein: Provide the following:

1) Describe the function

2) Digestion

3) Source

4) Identify calorific value

Fats: Provide the following:

1) Describe the function

2) Digestion

3) Source

4) Identify calorific value

Describe the functions of micronutrients (vitamins and minerals). Provide an example of a vitamin and mineral.

HEALTHY-EATING GUIDELINES

Explain the following common terminology related to nutrition.

TERM	EXPLANATION
UK dietary reference values (DRV)	
Recommended daily allowance (RDA)	
Recommended daily intake (RDI)	
Glycemic Index	

In the table below provide the values for 60g of the breakfast cereal?

Nutrition Information		
Typical value per 100 g	Per 30 g serving with 125 ml of semi-skimmed milk	
ENERGY	1639 kJ 387 kcal	743 kJ 175 kcal
PROTEIN	5 g	6 g
CARBOHYDRATE	85 g	32 g
of which sugars	35 g	17 g
starch	50 g	15 g
FAT	2.5 g	3 g
of which saturates	1 g	1.5 g
FIBRE	2 g	0.6 g
SODIUM	0.3 g	0.15 g
SALT	0.75 g	0.35 g
VITAMINS:	(% RDA)	(% RDA)
VITAMIN D	4.2 µg (83)	1.3 µg (25)
THIAMIN (B ₁)	0.9 mg (83)	0.3 mg (30)
RIBOFLAVIN (B ₂)	1.2 mg (83)	0.7 mg (47)
NIACIN	13.3 mg (83)	4.2 mg (26)
VITAMIN B ₆	1.2 mg (83)	0.4 mg (31)
FOLIC ACID	166 µg (83)	58 µg (29)
VITAMIN B ₁₂	2.1 µg (83)	1.2 µg (46)
MINERALS:		
CALCIUM	456 mg (57)	288 mg (36)

<http://firststepnutritionblog.files.wordpress.com/2013/04/label2.jpg>

Energy (Kcal)	
Protein	
Carbohydrates	
Of which sugars	
Fat	
Of which saturates	
Fibre	

Identify the 2 different types of cholesterol.

Which type of cholesterol is linked to health conditions and what role does it play in these conditions (link to an example).

What health risks can be associated with weight loss diets and fads?

What are the differences between evidence-based information and marketing claims of suppliers?

Identify 3 professions, including governing bodies, linked to nutrition.

PROFESSION	NOTES / ADAPTATIONS / ALTERATIONS

Providing examples, what is healthy food preparation.

What are the benefits?

Provide **2** negative conditions associated with unhealthy eating and a sedentary lifestyle.

Provide **3** pieces of healthy-eating advice to promote a healthy diet.

Why will the above eating advice promote a healthy diet?

What professional role boundaries are present to personal trainers when offering nutritional advice to clients?

GUIDANCE AND ADVICE FOR EATING TO SUPPORT TRAINING

Evaluate potential health and performance implications of severe energy restriction, weight loss and weight gain.

PROS:	CONS:

Why is it important to communicate these risks to clients?

Identify the nutritional model this plate provides:

2) Label each segment in the picture, identifying recommended portion sizes of each food group.



Answer below:

No. 1	
No. 2	
No. 3	
No. 4	
No. 5	

What are the main benefits of using the above-mentioned model?

Where can people find reliable sources of nutritional information?

Explain how cultural and religious dietary practices can influence nutritional advice.

RELIGION	DIETARY RESTRICTIONS

What are the benefits of protein supplementation?

What are the safety considerations / contraindications of protein supplementation?

What are the benefits of vitamin supplementation and consider their effectiveness and contraindications to these supplementations?

What are the safety considerations / contraindications of vitamin supplementation?

Define the role of fats as fuel for:

1) Aerobic energy production

2) Anaerobic energy production

How can you estimate a client's current level of physical activity and thereby provide energy requirements for your client's diet?

Provide the equation to calculate BMR (Basal Metabolic Rate).

What is the energy balance equation?

Why should clients undergoing major dietary changes be referred to a registered dietician?

Define the role of fats as fuel for:

1) Aerobic energy production

2) Anaerobic energy production

Define the role of proteins as fuel for:

1) Aerobic energy production

2) Anaerobic energy production

Why is confidentiality important when collecting nutritional information?

Identify energy expenditure for 3 different physical activities.

EXERCISE	KCAL UTILISED

What are legal and ethical implications of gathering nutritional information.

Why is it important to gain client's informed consent before collecting nutritional information.

What is the recommended government fluid intake for men and women?

Explain situations where fluid-intake amounts should change, providing reasons why this should happen.

What information needs to be collected to offer nutritional advice to clients?

How can you sensitively divulge collected information regarding your client?

What issues could a client find sensitive when collecting nutritional information.

Why is it important to reassess a client's body composition and other health-related parameters at agreed stages of a programme?

How often are you going to review your client's plan?

Discuss potential barriers your client may face preventing them from achieving their nutritional goals?

Provide your client with basic healthy-eating advice relevant to their lifestyle and goals.

Goals: What are the agreed goals between you and your client?

What motivational strategies can you use with your client to encourage healthy eating and prevent relapse?

CASE STUDY

Client	
Age	
Address	
Contact information	
Medical conditions	

Explain different methods that can be used to measure body composition

METHOD	EXPLANATION

What are different formats for recording nutritional information?

FORMAT	DESCRIBE THIS FORMAT

Explain which of the above can be used as an assessment of a client?

How can information / results gained from the above tests be interpreted?

When could people other than the client be involved in nutritional goal setting? Provide examples.

Goals: What are your client's goals?

GOAL	DESCRIPTION OF GOAL

Provide your client with **2** reliable sources of educational information to provide nutritional advice.

Complete the following food diary on a typical day of your client.

Client Name:

BREAKFAST		TIME YOU ATE IT?:
FOOD/ DRINK ITEM/ DESCRIPTION, AMOUNT		
HOW WERE YOU FEELING? (BORED/ FED UP/ HUNGRY ETC.)		

SNACKS		TIME YOU ATE IT?:
FOOD/ DRINK ITEM/ DESCRIPTION, AMOUNT		
HOW WERE YOU FEELING? (BORED/ FED UP/ HUNGRY ETC.)		



LUNCH		TIME YOU ATE IT?:
FOOD/ DRINK ITEM/ DESCRIPTION, AMOUNT		
HOW WERE YOU FEELING? (BORED/ FED UP/ HUNGRY ETC.)		

SNACKS		TIME YOU ATE IT?:
FOOD/ DRINK ITEM/ DESCRIPTION, AMOUNT		
HOW WERE YOU FEELING? (BORED/ FED UP/ HUNGRY ETC.)		



DINNER		TIME YOU ATE IT?:
FOOD/ DRINK ITEM/ DESCRIPTION, AMOUNT		
HOW WERE YOU FEELING? (BORED/ FED UP/ HUNGRY ETC.)		

SNACKS		TIME YOU ATE IT?:
FOOD/ DRINK ITEM/ DESCRIPTION, AMOUNT		
HOW WERE YOU FEELING? (BORED/ FED UP/ HUNGRY ETC.)		

Did you have any supplements alongside any of your meals? If so what one(s)?

SUPPLEMENTS

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Total number of servings for the following 6 groups:

Bread, cereal, rice and pasta group	
Vegetable group	
Fruit group	
Milk, yoghurt & cheese group	
Meat, poultry, fish, dry beans, eggs and nuts group	
Fats, oils and sweets group	

What conclusions can be drawn from your client's food diary above.

What are some of the signs and symptoms of disordered eating and healthy eating patterns?

How can you interpret information gathered from your client and what key pieces of information are you as a personal trainer looking for?

What are the key features of the 'Managing users with suspected eating disorders' guidance notes?

Under what circumstances should a client be recommended to visit their GP about the possibility of a referral to a registered dietician?

Commands explained

LIST / IDENTIFY	Name examples of the question. Detail is not needed here – you do not need to expand on the example given
DESCRIBE	Paints a picture about something
EXPLAIN	Should give reasons for things and should include the ‘how’ and ‘why’ of the topic of interest. Generally the word ‘because’ is used
EVALUATE	Look at both the strengths & weaknesses/ pros and cons/ advantages & dis-advantages of the question
ANALYSE	This is comparing and contrasting. For example when analysing the heart it is sometimes compared to a mechanical pump, but the contrast is that it is biological tissue (muscle) rather than mechanical and metal/ plastic

Here's an example

List / Identify	<ul style="list-style-type: none"> • Dumbbells • Barbell • Weight plates • Treadmill • Cross trainer
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Describe one of these pieces of equipment:

DESCRIBE	The barbell is a straight bar which can be used for a variety of exercises, such as deadlift, squat, bench press. An Olympic barbell weights 20kg and is 7 feet long. It is texturised metal in the middle of the bar. Weight plates are put at either end of the bar and are held in place by safety clips
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Explain this piece of equipment:

EXPLAIN	The Olympic barbell is used in gyms because it is a standardised size which will fit any standard weight plates and allow people to train in the same way regardless of the gym facility used. The texturised metal in the middle of the bar aids grip because it stops the bar slipping. Safety clips are very important when using a barbell with weight plates because if they are not used the plates can fall off of the bar, causing injury
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Evaluate this piece of equipment:

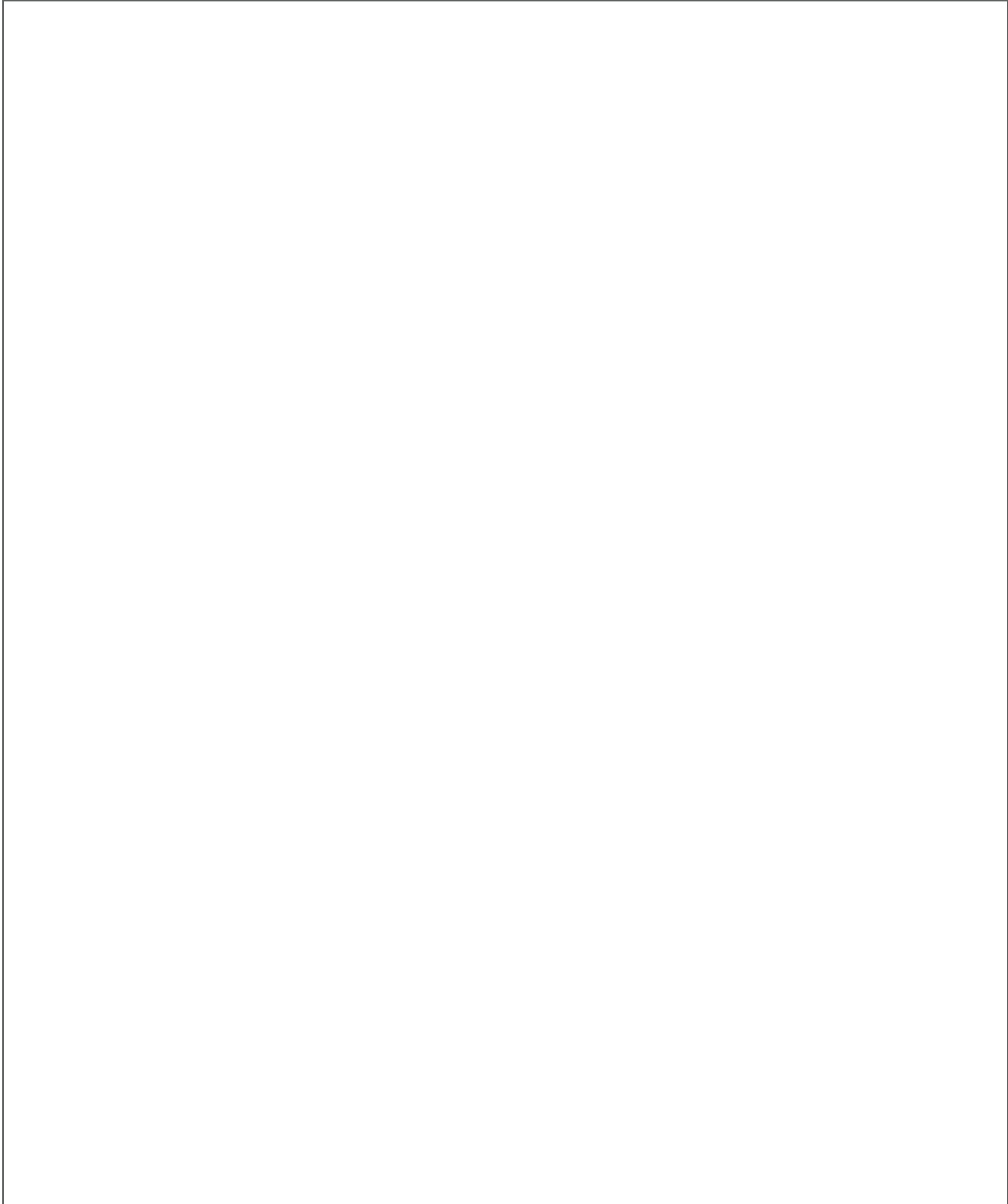
EVALUATE	Pros: Olympic bars are good pieces of equipment to use as they are standardised pieces of equipment. A variety of exercises can be performed using a barbell such as the deadlift, the squat and the bench press. Cons: Olympic bars can be too heavy for smaller framed people. They can be dangerous for inexperienced users if technique is poor. Also, the texturised grip can cause damage to the skin on hands
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Analyse this piece of equipment:

ANALYSE	The Barbell is an important piece of equipment in the development of core stabilisation, muscular strength and muscular power. It can help build strength and power in the legs during the squat and deadlift (comparing). It differs from dumbbells (contrasting) as with the barbell both hands are connected by the bar but dumbbells are independent of each other, sometimes making exercises harder
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Additional Notes

This section is for you to use for any further notes you would like to make or to complete any of your answers if you found that you ran out of space during the completion of this document:



Assessment Feedback

Tutor Name:

Student Name:

First submission date:

Feedback:

Tutor signed:

Date:

Resubmission...

Resubmission date:

Feedback:

Tutor signed:

Date:

Assessor - Please put an 'X' in the relevant box.

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