

Pearson BTEC Level 3 Nationals Extended Diploma

Paper
reference

31824H

Sport and Exercise Science

UNIT 13: Nutrition for Sport and Exercise Performance Nutritional Principles Information Booklet

Insert

You do not need any other materials.

Instructions

- You will need the information in this booklet to answer Activities 1 and 2.
- Read the information carefully.
- You must **not** write your answers in this booklet.
- Only your answers given in the task and answer booklet will be marked.

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Nutritional principles information sheet

Nutritional programme

The table below places some of the foods from the nutritional programme into specific food groups.

Food	Food group
Broccoli	Fruit and vegetables – a type of vegetable
Chickpeas	Protein – a type of vegetable protein
Jam	Fats and sweets – fruit and sugar-based spread
Noodles	Grains – a type of pasta
Potato salad	Fruit and vegetables – a type of vegetable Fats and sweets – salad cream
Prawns	Protein – a type of seafood
Salmon	Protein – a type of fish
Tuna	Protein – a type of fish
Spaghetti	Grains – a type of pasta
Sweet corn	Fruit and vegetables – a type of vegetable

Energy content of macronutrients

1 g protein provides **4 kcal**

1 g carbohydrate provides **4 kcal**

1 g of fat provides **9 kcal**

Harris Benedict equation to calculate basal metabolic rate (BMR)

Males = $66.5 + (13.75 \times \text{weight in kg}) + (5.003 \times \text{height in cm}) - (6.755 \times \text{age in years})$

Females = $655.1 + (9.563 \times \text{weight in kg}) + (1.85 \times \text{height in cm}) - (4.676 \times \text{age in years})$

Activity levels

Sedentary: $\text{BMR} \times 1.2$

Lightly active: $\text{BMR} \times 1.375$

Moderately active: $\text{BMR} \times 1.55$

Very active: $\text{BMR} \times 1.725$

Extra active: $\text{BMR} \times 1.9$

Body mass index equation

Body mass index (BMI) = $\frac{\text{Weight in kg}}{\text{Height in m} \times \text{Height in m}}$



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Please check the examination details below before entering your candidate information

Candidate surname

Other names

Centre Number

Learner Registration Number

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Pearson BTEC Level 3 Nationals Extended Diploma

Time 3 hours

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Sport and Exercise Science

UNIT 13: Nutrition for Sport and Exercise Performance

Part S

You must have:

A calculator

Nutritional principles information booklet (enclosed)

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and learner registration number.
- Answer **all** activities.
- Answer the activities in the spaces provided
– *there may be more space than you need.*
- This booklet contains material for the completion of the set task under supervised conditions.
- This booklet is specific to each series and this material must only be issued to learners who have been entered to undertake the task in the relevant series.
- This booklet must be kept securely until the start of the 3-hour supervised assessment session.

Information

- The total mark for this paper is 50.
- A nutritional principles information booklet is supplied.
- The marks for **each** activity are shown in brackets
– *use this as a guide as to how much time to spend on each activity.*

Advice

- Read each activity carefully before you start to answer it.
- Try to answer every activity.
- Check your answers if you have time at the end.

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Instructions to Teachers/Tutors

The set task should be completed during the 3-hour session as timetabled by Pearson.

The set task must be carried out under supervised conditions.

Learners must complete this set task in the task and answer booklet.

Teachers/tutors should note that they are responsible for maintaining security and for reporting issues to Pearson. In particular:

- only permitted materials for the set task can be brought into the supervised environment
- during any permitted break and at the end of the session, materials must be kept securely, and no items removed from the supervised environment.

Maintaining security

- During supervised assessment sessions, the assessment areas must only be accessible to the individual learners and to named members of staff.
- Learners can only access their work under supervision.
- Any work learners produce under supervision must be kept securely.
- Learners are not permitted to have access to the internet or other resources during the supervised assessment period.

After the session, the teacher/tutor will confirm that all learner work was completed independently as part of the authentication sheet submitted to Pearson.

This paper must be read in conjunction with the unit information in the specification and the BTEC Nationals *Instructions for Conducting External Assessments (ICEA)* document.

See the Pearson website for details.

Outcomes for submission

Each learner must submit:

- a completed task and answer booklet.

Learners must complete a declaration that the work they submit is their own.

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Guidance for Learners

Read the set task information carefully.

In this booklet you will be asked to carry out specific activities using the information given.

The supervised assessment task must be taken in a single session of 3 hours. You may be provided with a supervised break during the assessment in addition to the specified hours.

You must plan your time and work independently throughout the 3-hour supervised assessment period.

You will complete the activities within the set task under supervision and your work will be kept securely during any breaks taken.

You must work independently and must not share your work with other learners.

Your teacher/tutor may clarify the wording that appears in this task but cannot provide any guidance on completion of the task.

Outcomes for submission

You must submit:

- a completed task and answer booklet.

You must complete a declaration that the work you submit is your own.



Set Task Information

You should read the case study carefully looking at the client's personal information, their current typical nutritional programme and how these relate to each other.

You will need to spend at least **30 minutes** on this before you start the activities in the Set Task.

The nutritional principles information booklet gives extra information on nutritional values that will help you with Activities 1 and 2. You should study this information carefully.

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Client Information

Personal details

Jackie is a javelin thrower.

Her nutritional programme represents what she typically consumes during a seven-day period.

Age	16 years old
Gender	Female
Height	1 m 80 cm
Weight	58 kg
BIA result	15%
Activity levels	Extra active

Performance details

Sports event

Jackie is a county javelin thrower. The javelin is a strength based athletics event. An athlete in a javelin competition has three throws with a long rest period between each throw. The top eight athletes have three more throws in the final.

Her nutritional programme shows what she eats, drinks, and the activities she completes each day.

Phase of event

Jackie is in the 'post-event' phase, that covers the 4-hour period after the event has finished.



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Current typical nutrition programme									
Day	Breakfast 8.30 am	Lunch 12.30 pm	Dinner 8 pm	Fluids throughout the day	Snacks throughout the day	Calories	Macronutrients	Activity levels and timings	
Monday	Two slices of brown bread toasted with jam	Potato salad, lettuce and tomato	Spaghetti with prawns and tomato sauce	2 litres of water 330 ml isotonic sports drink 1 glass of orange juice	None	1965kcal	Carbohydrates 300g Fat 65g Protein 45g	7–8am Weight training 6–7 pm Fitness training	
Tuesday	Two slices of brown bread toasted with jam	Brown pasta salad with tuna and broccoli	Grilled salmon, boiled potatoes, peas and carrots	2 litres of water 330 ml isotonic sports drink 1 glass of orange juice	None	2056kcal	Carbohydrates 320g Fat 64g Protein 50g	7–8am Weight training 6–7 pm Javelin training	
Wednesday	Two slices of brown bread toasted with jam	Brown bread, tuna and sweet corn sandwich	Baked potato with cheese Lettuce, tomato, and cucumber salad	2 litres of water 330 ml isotonic sports drink 1 glass of orange juice	None	2044kcal	Carbohydrates 325g Fat 64g Protein 42g	7–8am Weight training 6–7 pm Fitness training	
Thursday	Two slices of brown bread toasted with jam	Potato salad, lettuce and tomato	Rice with vegetables, chickpeas and tomato sauce Garlic bread	2 litres of water 330 ml isotonic sports drink 1 glass of orange juice	None	1812kcal	Carbohydrates 275g Fat 60g Protein 43g	7–8am Weight training 6–7 pm Javelin training	



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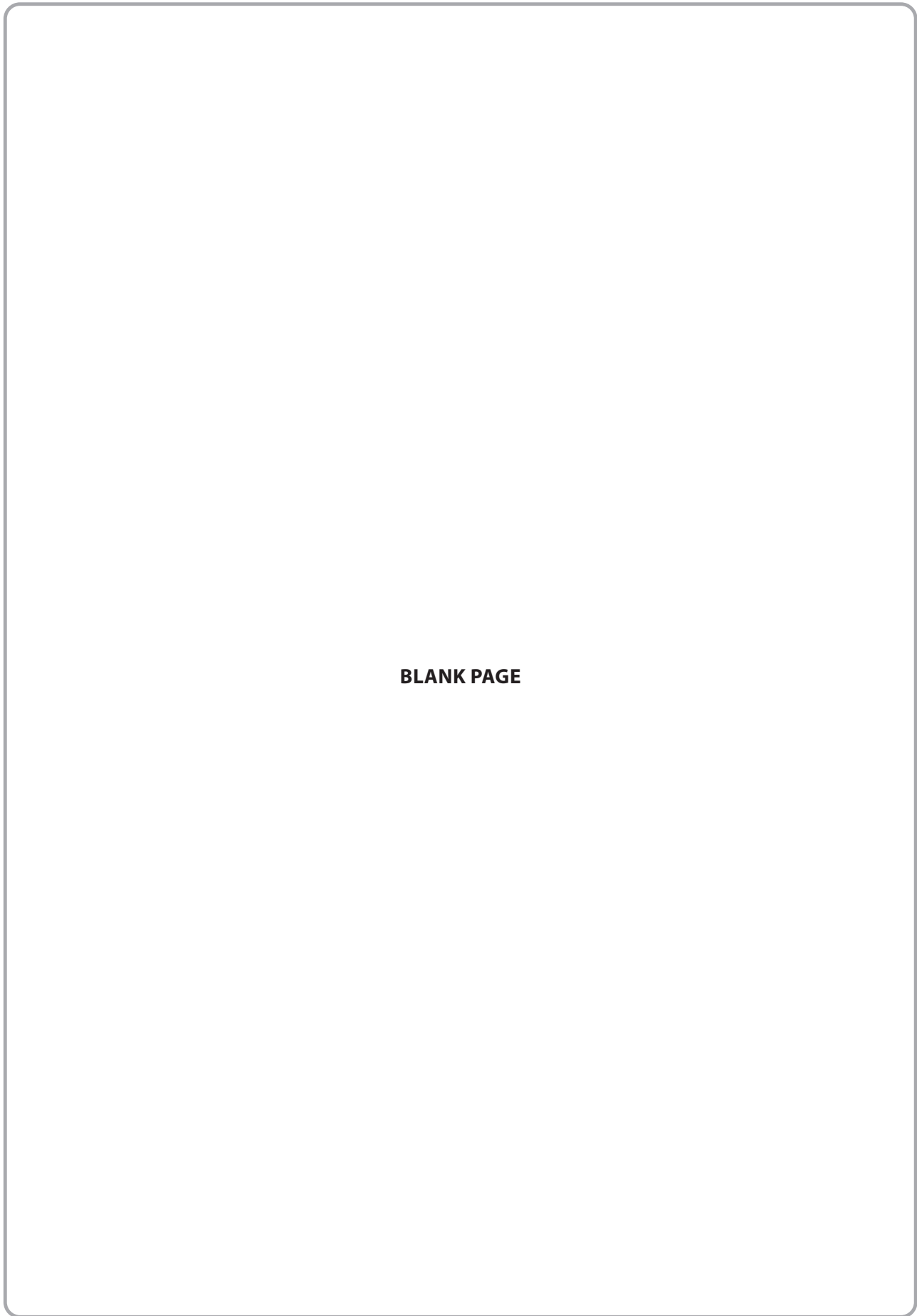
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Day	Breakfast 8.30 am	Lunch 12.30 pm	Dinner 8 pm	Fluids throughout the day	Snacks throughout the day	Calories	Macronutrients	Activity levels and timings
Friday	Two slices of brown bread toasted with jam	Brown bread, tuna and sweet corn sandwich	Stir fry vegetables, prawns and noodles	2 litres of water 330 ml isotonic sports drink 1 glass of orange juice	None	1828kcal	Carbohydrates 280g Fat 60g Protein 42g	7-8 am Weight training 6-7 pm Javelin training
Saturday	Two slices of brown bread toasted with jam	Tomato soup with brown bread roll	Grilled salmon, boiled potatoes, broccoli and carrots	2 litres of water 2 glasses of orange juice	None	1898kcal	Carbohydrates 290g Fat 62g Protein 45g	Rest day
Sunday	Two slices of brown bread toasted with jam	Baked potato with cheese Lettuce and tomato salad	Pasta with tuna and sweet corn	2 litres of water 330 ml isotonic sports drink 1 glass of orange juice	None	1940kcal	Carbohydrates 300g Fat 60g Protein 50g	7-8 am Weight training 2-4 pm Javelin training



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Set Task

You must read the information carefully.

Complete all your work in the task and answer booklet in the space provided.

Activity 1

Interpret Jackie's current nutritional programme, in relation to nutritional intake for health and wellbeing.

Use the nutritional principles information booklet to support your answer.

(Total for Activity 1 = 20 marks)

Activity 2

Modify the nutritional programme, based on nutritional strategies, in relation to Jackie's sports event.

Use the nutritional principles information booklet to support your answer.

(Total for Activity 2 = 20 marks)

Activity 3

Recommend nutritional guidance for Jackie based on her phase of event.

The phase of event is 'post-event'.

(Total for Activity 3 = 10 marks)



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(Total for Activity 1 = 20 marks)



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(Total for Activity 2 = 20 marks)



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(Total for Activity 3 = 10 marks)

TOTAL FOR TASK = 50 MARKS



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