



# Nutrition for best performance

## Badminton

### BRONWEN CHARLESSON







## Question 1

Which of the following is the best fuel for training?

◆ A: Fat

◆ B: Protein

◆ C: Carbohydrate

◆ D: Alcohol



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## Question 2

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- ◆ B: Tomato, Lettuce, beetroot and peppers
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## Question 3

When training twice a day should you eat extra snacks?

- ◆ A: No, your body will make its own energy
- ◆ C: Yes, training more means you can eat what you like
- ◆ B: Yes, food is essential for recovery, when sessions are less than 8hrs apart
- ◆ D: No, except if you are trying to gain weight.



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## Question 4

Which of one of these would be a good recovery snack after training?

- ◆ A: Banana and Milk
- ◆ B: Apple and Juice
- ◆ C: Cheeseburger
- ◆ D: Water



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## Question 5

After training, when is the best time to eat a recovery meal or snack?

- ◆ A: Straight away while your muscles are hungry
- ◆ B: Wait at least 2hours to let your stomach settle
- ◆ C: Wait 1 hour to stop your body storing fat.
- ◆ D: Eat when you next feel hungry.



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## Question 6

How long before training should you eat a snack or meal?

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- ◆ B: 1.5hrs
- ◆ C: 15mins
- ◆ D: Directly before



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## Question 7

If you had a 15 minute break between matches which of the following is the best food to eat?

- ◆ A: Chocolate bar and packet of crisps
- ◆ B: Sandwich with chicken, coleslaw and salad
- ◆ C: Left over sweet and sour chicken and rice.
- ◆ D: Banana and small cup of chocolate milk



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## Question 8

Before starting training or competition, what is an easy way of checking your hydration?

- ◆ A: Urine colour. It should be a light straw colour
- ◆ B: Mouth and Lips. They should be moist.
- ◆ C: Fluid intake. You will be hydrated if you have drunk more than 2Litres.
- ◆ D: Trick question. There is no easy way to know if you are hydrated.



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## Question 9

An average 60kg badminton player, training once a day needs to eat around 300g of carbohydrate (5g/kg). Which one of the following would provide 300g?

- A: 1 pack cornflakes, 1 slices bread, 1 large bananas. 1/2 pint orange juice, 1 small potato, 1 large handfuls penne (cooked)
- B: 2 boxes cornflakes, 2 slices bread, 2 large bananas. 1 pint orange juice, 1 large potato, 2 large handfuls penne (cooked)
- C: 3 boxes cornflakes, 3 slices bread, 3 large bananas. 1 1/2 pint orange juice, 2 large potato, 3 large handfuls penne (cooked)
- D: 4 boxes cornflakes, 4 slices bread, 4 large bananas. 2 pints orange juice, 3 large potato, 4 large handfuls penne (cooked)



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## Question 10

How much protein does an average 60kg badminton player, training once a day, need?

- ◆ A: 0.5g/kg – 1 small chicken breast
- ◆ C: 1.5g/kg – 1 Pint milk, 1 small egg,  $\frac{1}{2}$  tin tuna, 1 small chicken breast, 200g yoghurt
- ◆ B: 3g/kg – 1 Pint milk, 1 egg, 1 tin tuna, 2 large chicken breasts, 200g yoghurt
- ◆ D: 2g/kg: 1 Pint milk, 1 small egg,  $\frac{1}{2}$  tin tuna, 2 small chicken breasts, 200g yoghurt



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1. What should you eat/drink?
2. When should you eat?
3. How much should you eat?



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# What should you eat?

## High Carbohydrate

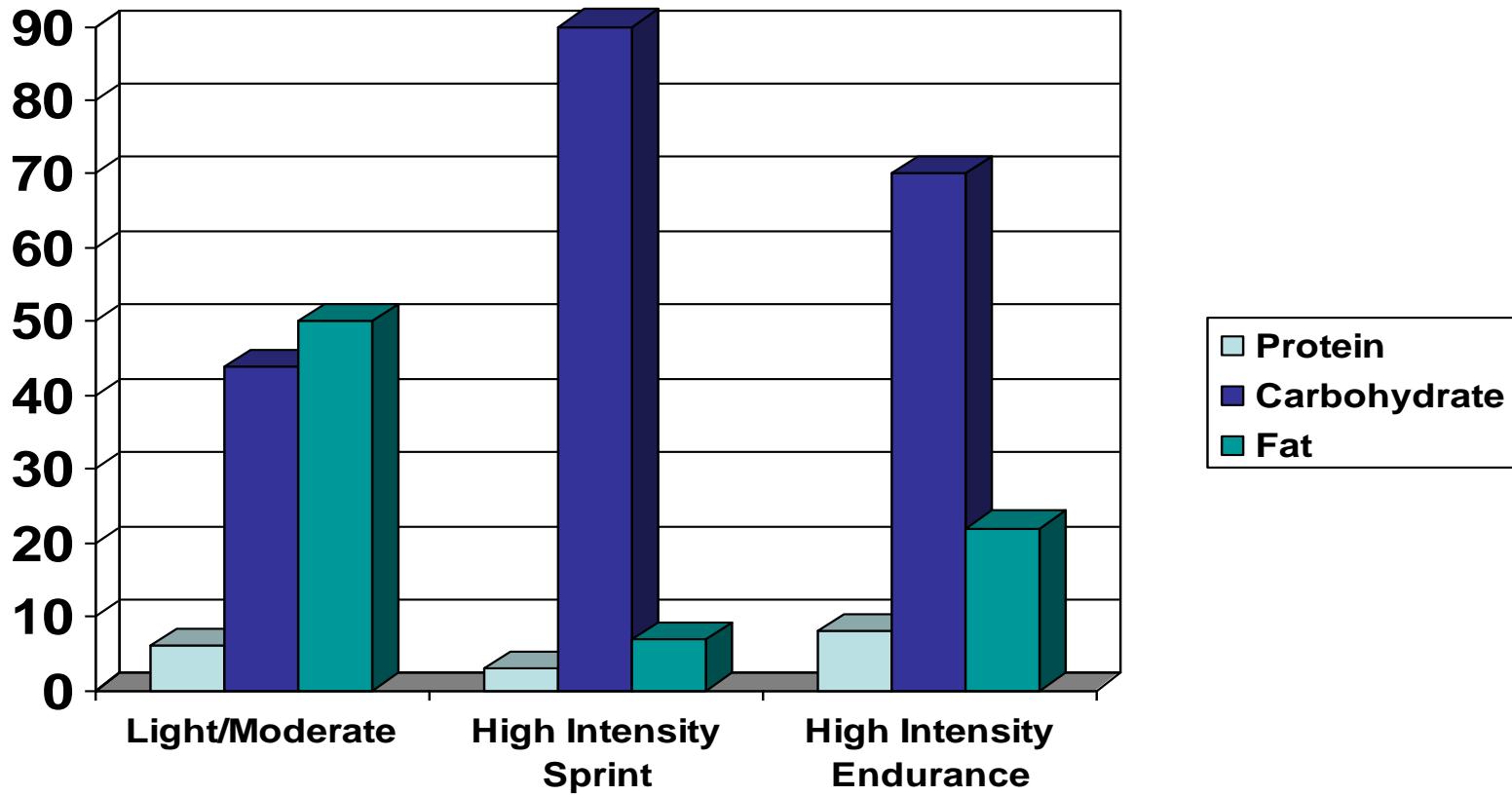
Glucose is the only source of energy the muscle can use at high intensity  
Store about 2 hours of energy



## Good Hydration

Dehydration increases fatigue and muscle damage.

# What should you eat?



# What should you eat?

## Strength

### Moderate Protein

Helps muscle repair and growth  
Immune system function



### Good Hydration

For every 1% you drop in body weight you get a 5% drop in performance

### Moderate Carbohydrate

Produces insulin – important for anabolism/growth



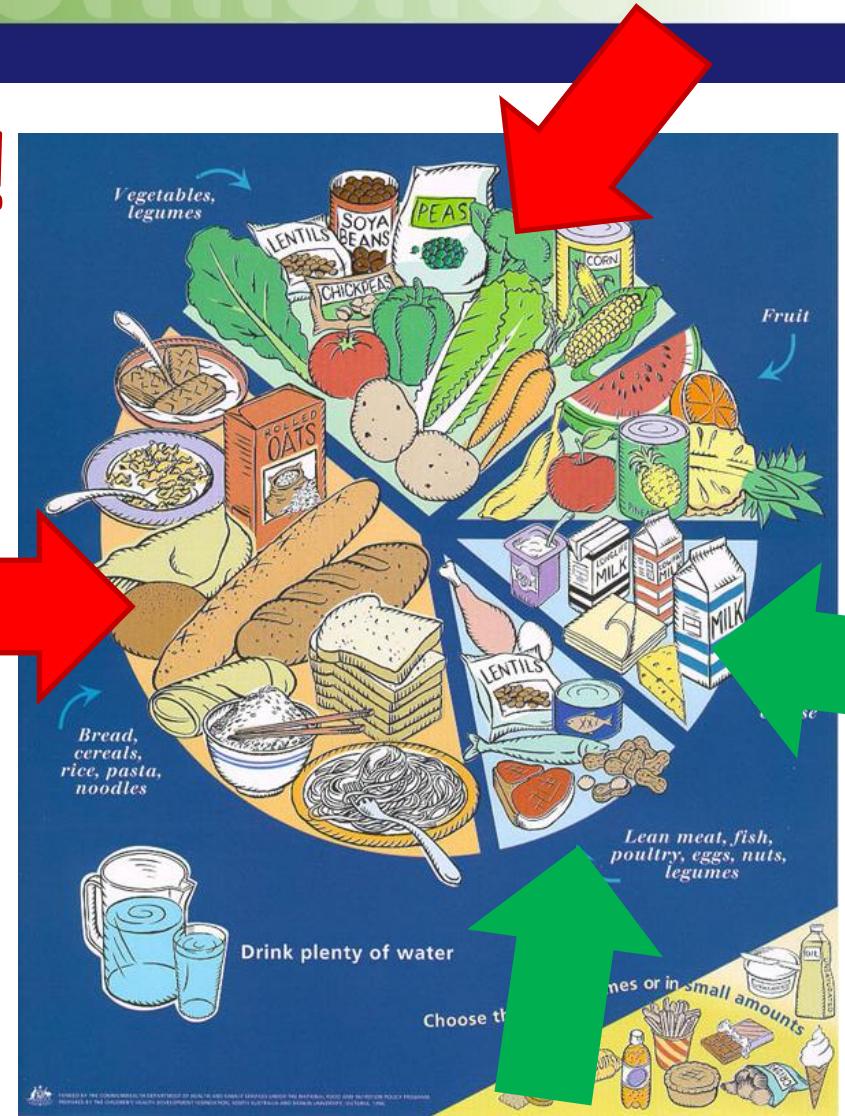
# What should you eat?

## High Carbohydrate!

- 60-70% energy should come from carbohydrates
- Include carbohydrates at each meal and snack

## High Protein!

- Include protein at each meal.
- Include protein in snack foods



# Snacks – Food Labels

## Fat and carbs:

- Look at **per 100g**
- Fat: less than 10g
- Carbohydrates: More than 20g

## Protein:

- Look at **per serve**
- Protein: 10g per amount eaten

### NUTRITION INFORMATION

Servings per pack : 11

Serving Size: 45g

	Per Serve	Per 100g
Energy	745 kJ	1640 kJ
Protein	5g	11g
Fat Total	3.5g	7.7g
-Saturated	1g	2.2g
Carbohydrates		
- total	33.5g	74g
- sugars	10g	22g
Fibre	4g	8.8g
Sodium	200mg	440mg
Calcium	100mg	220mg
Iron	1mg	2.2mg
Folate	100mcg	220mcg

Ingredients :

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_,

Manufacturer :

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_.

Storage Conditions :

\_\_\_\_\_, \_\_\_\_\_

# What should you eat?

## Brain function



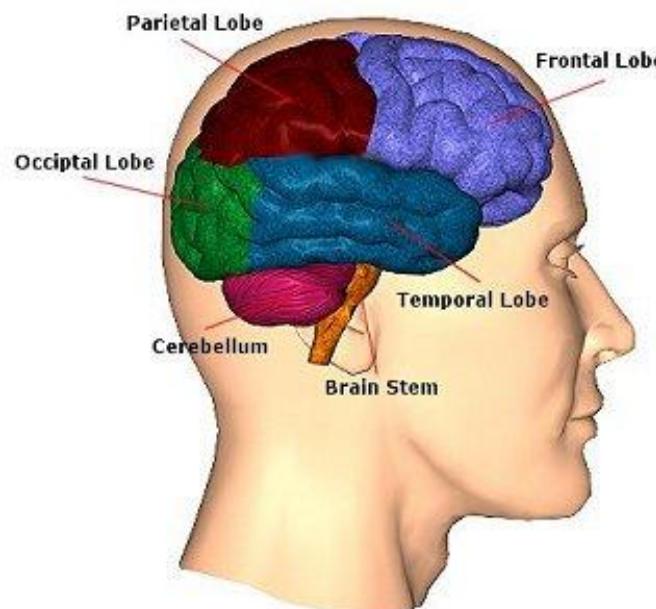
### Serotonin (5-HT)

- Role in sleep
- Fatigue
- Lethargy
- Drowsiness
- Dec. Motivation



### Dopamine (DA) and Noradrenaline (NA)

- Motivation
- Reward
- Memory
- Attention



# What should you eat?

## Brain function

### High Carbohydrate

Glucose is the ONLY source of energy the brain can USE - Provide constant fuel source  
Increase dopamine

### Low fat

Fat as a fuel source increase the production of serotonin



### Good Hydration

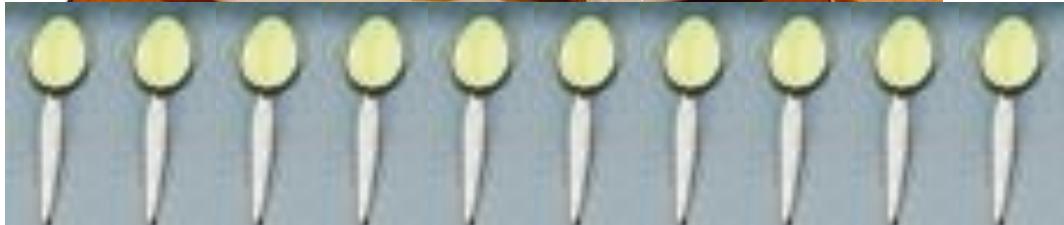
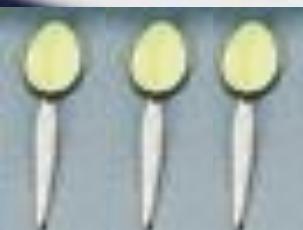
For every 1% you drop in body weight you get a 5% drop in performance

# What should you eat?

Fat

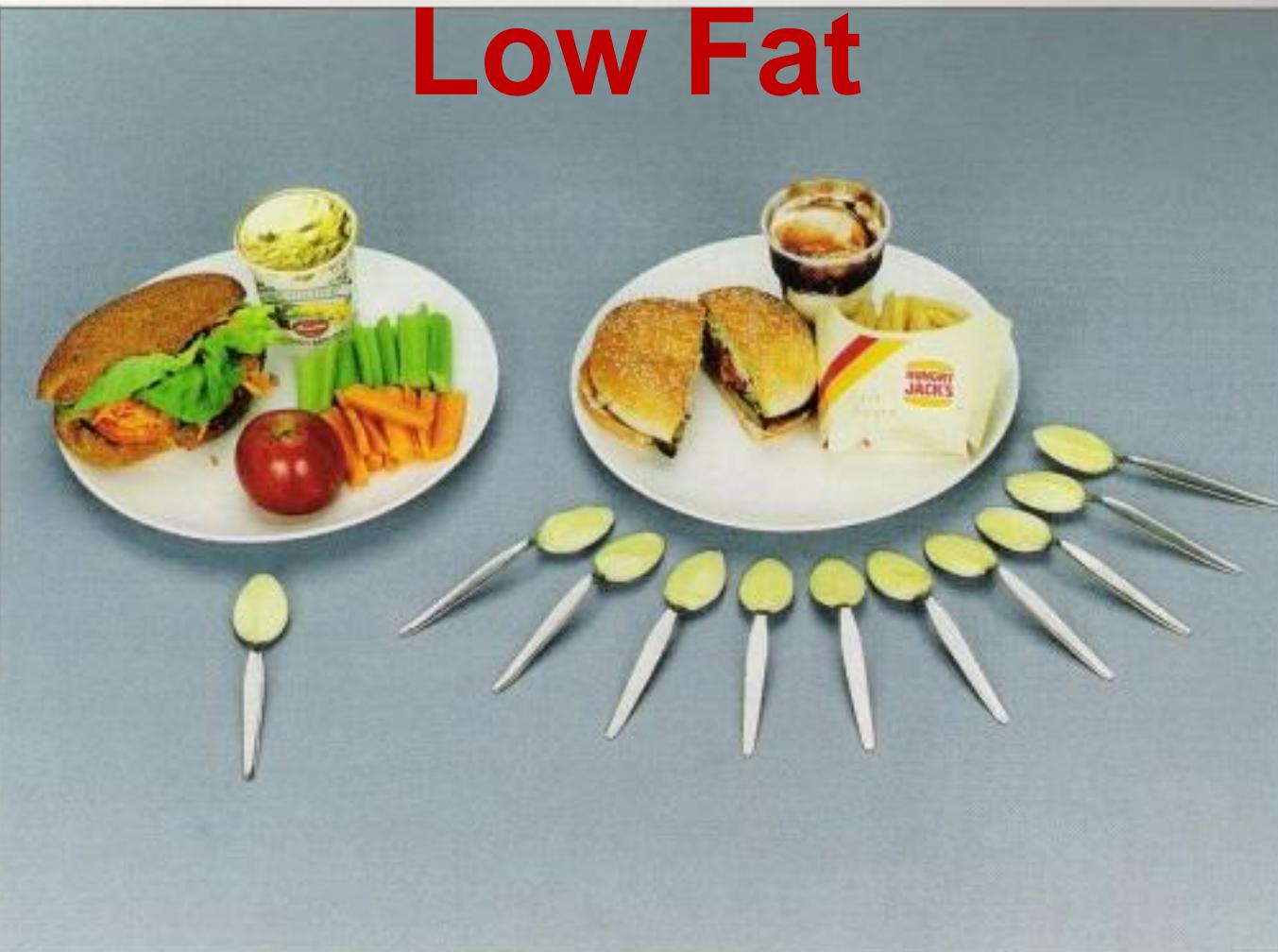


## Low Fat



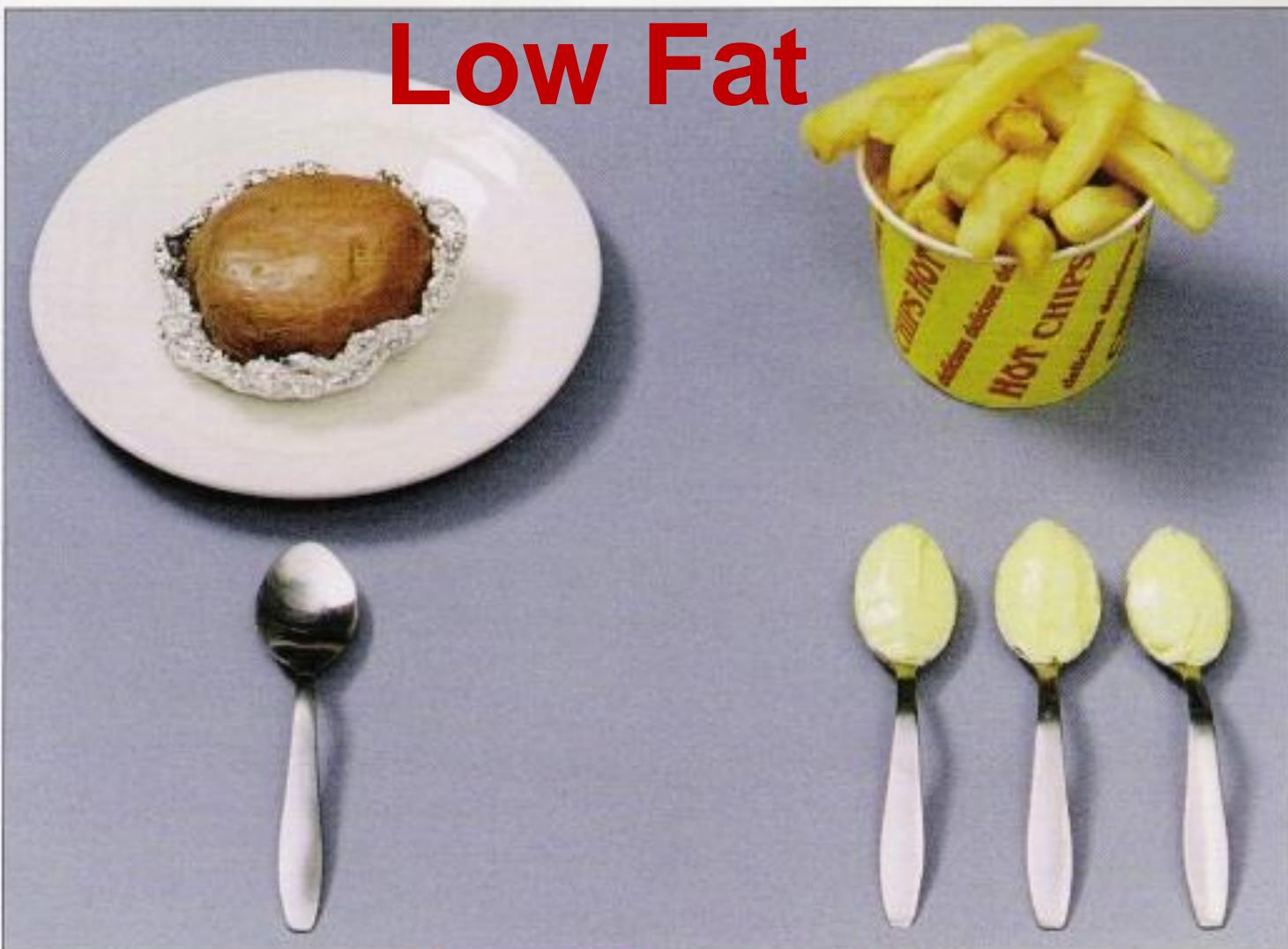
# What should you eat?

## Low Fat



# What should you eat?

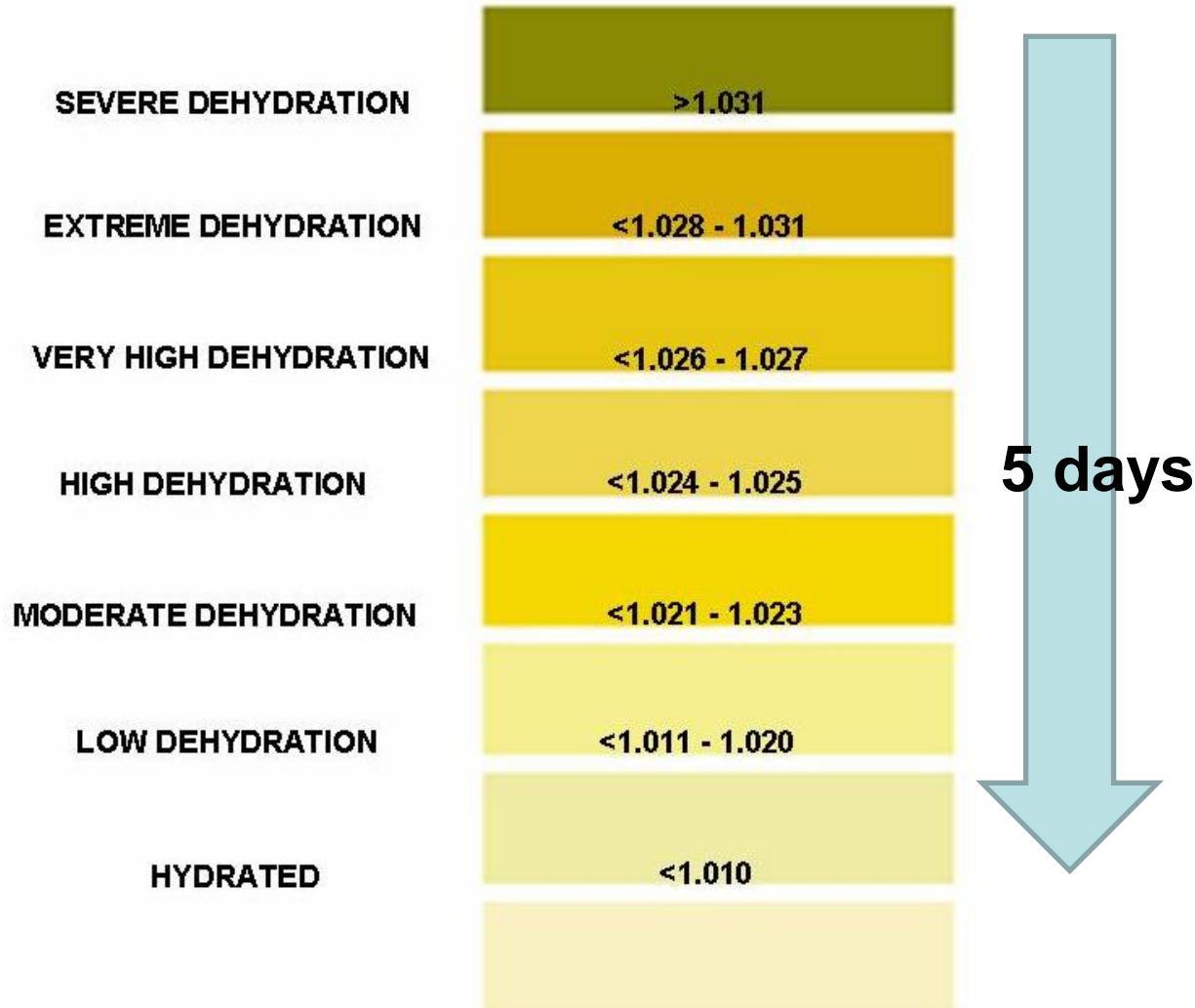
## Low Fat





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2. When should you eat?
3. How much should you eat?

# What should you drink?



# What should you drink?

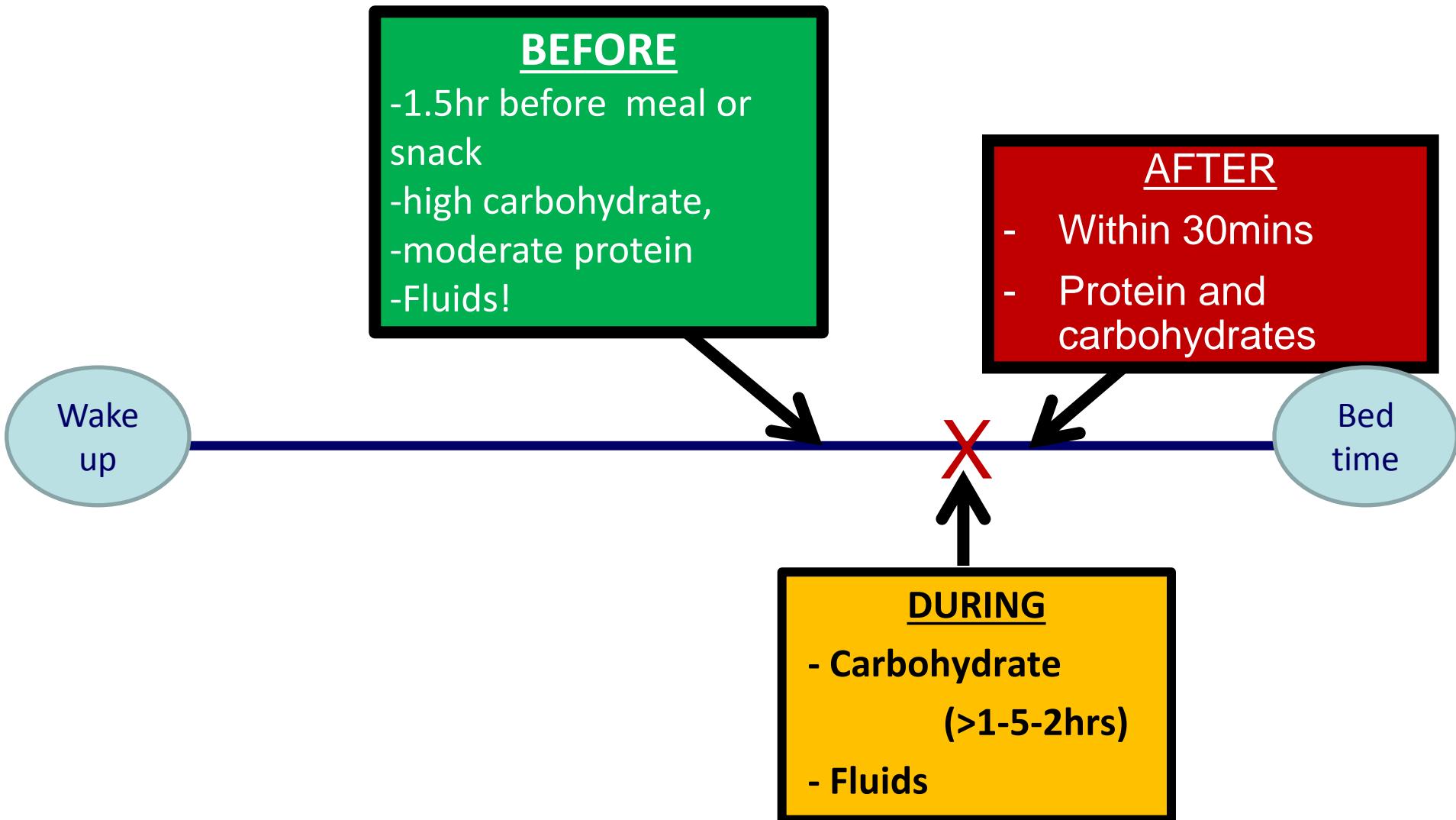
Do	Don't
<ul style="list-style-type: none"><li>• Drink water</li><li>• Choose a variety of different fluids</li><li>• Consider sports drinks for long intense training/competition days (1.5-2hrs)</li><li>• Take a water bottle when travelling and sip regularly</li></ul>	<ul style="list-style-type: none"><li>• Drink alcohol when dehydrated</li><li>• Use sports drinks for short or low intensity training/matches<ul style="list-style-type: none"><li>• Rely on tea and coffee for hydration</li></ul></li></ul> <p>Overdrink - you cannot store fluid!</p>





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2. When should you eat?
3. How much should you eat?

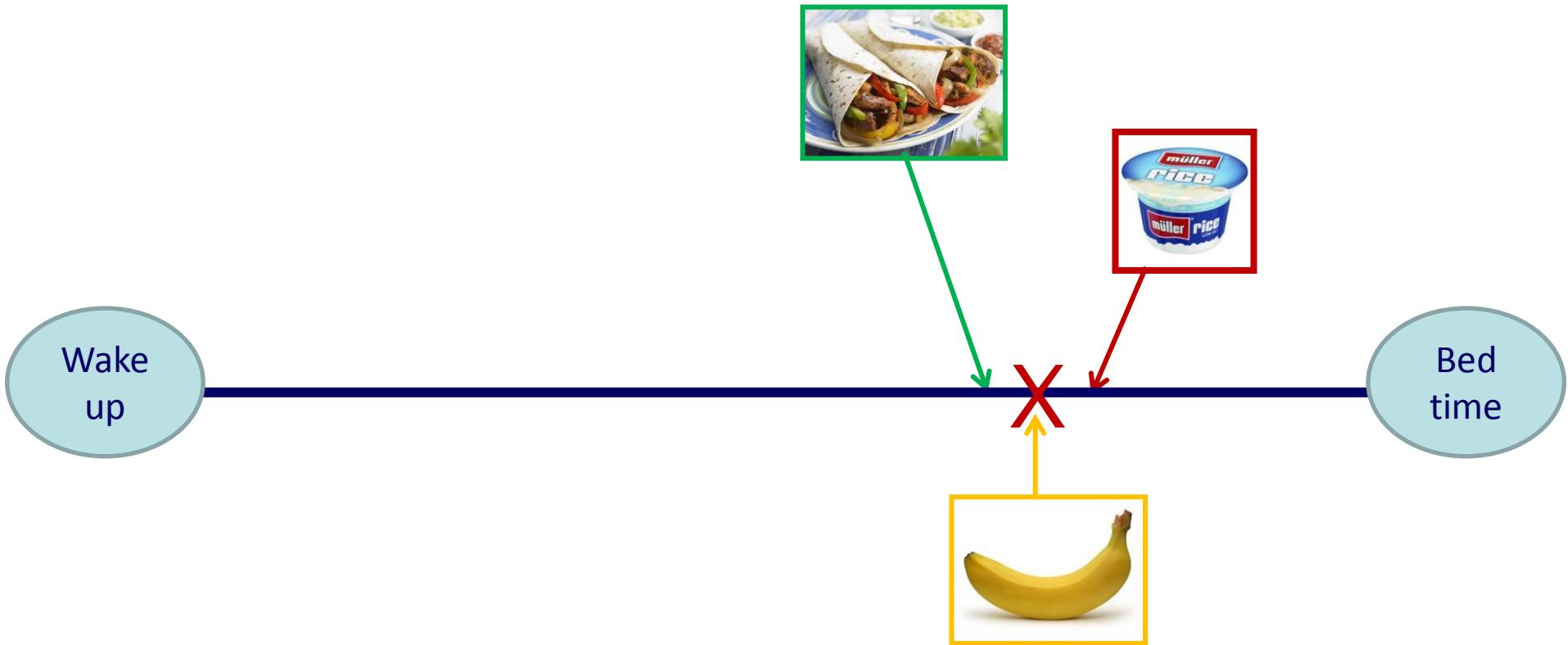
# When should you eat?





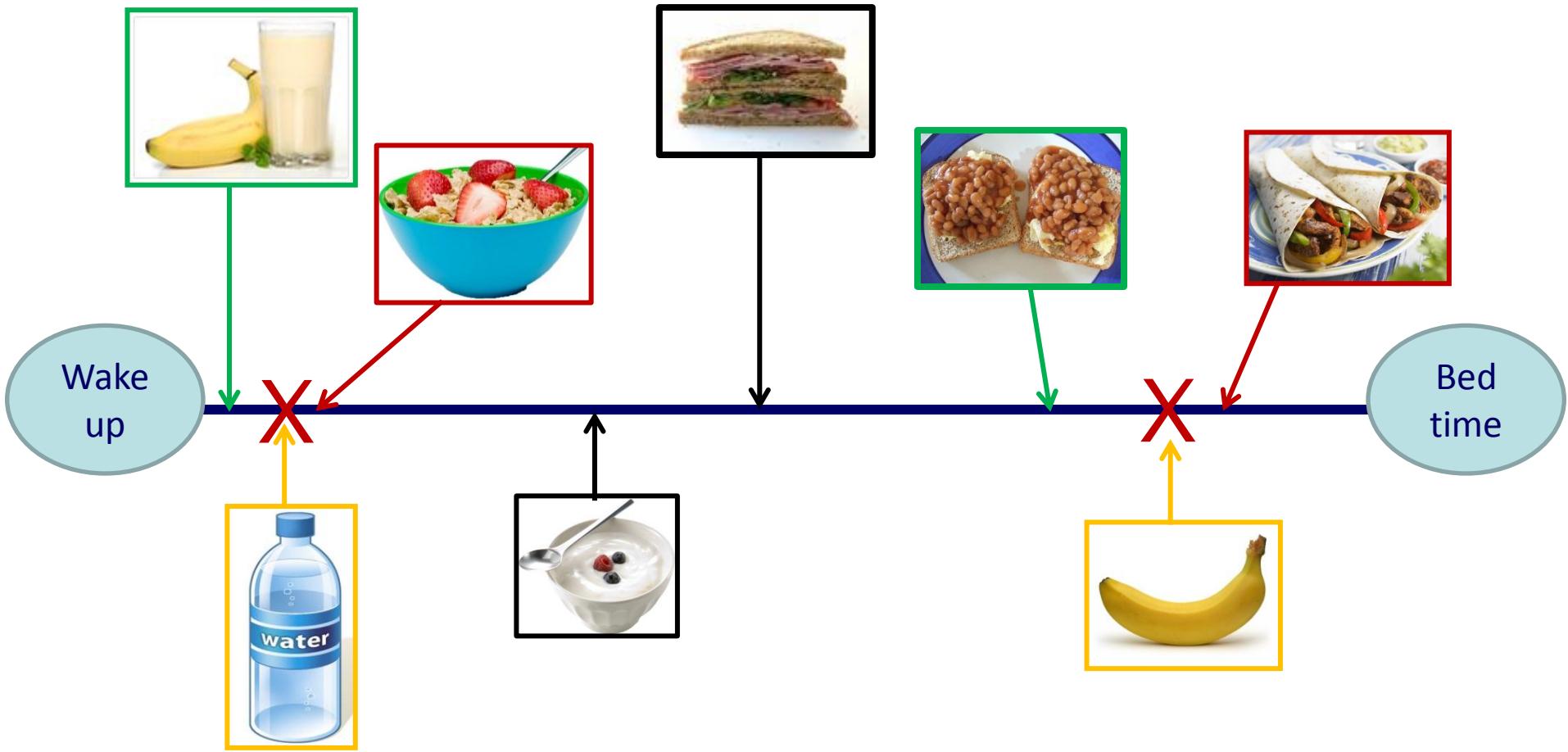
### 3. When should you eat?

#### 1 Session



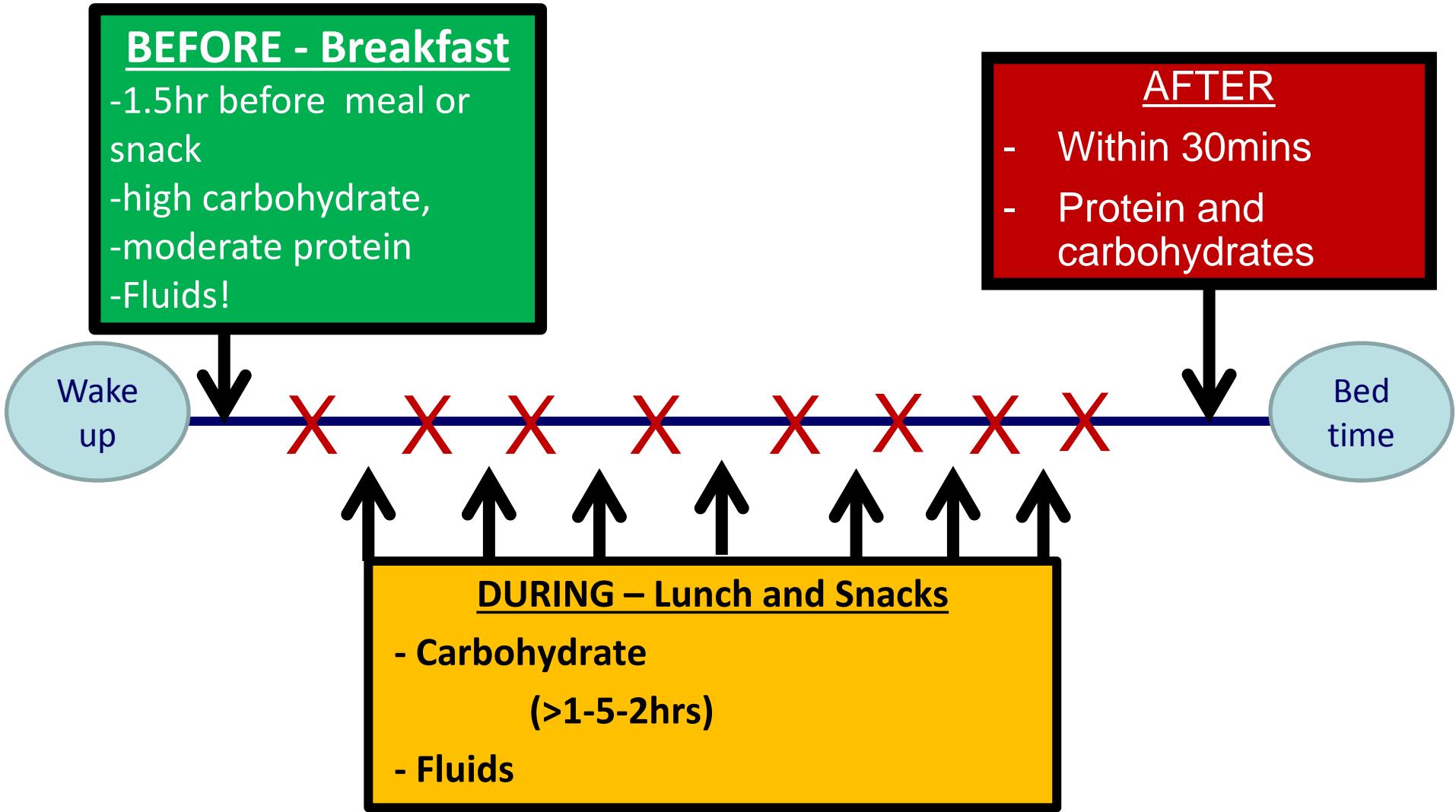
# 3. When should you eat?

- 2 sessions





# 3. When should you eat? Competition





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## **Everyday needs**

Breakfast, Lunch,  
Dinner

## **Training once each day**

2hr court session

## **Training twice a day**

Gym session – 1hr  
2hr court session

## **Competition**

5 matches (~30mins)

# Everyday needs

## Breakfast, Lunch, Dinner

- Protein: 1.5g/kg – 1 Pint milk, 1 small egg,  $\frac{1}{2}$  tin tuna, 1 small chicken breast, 200g yoghurt
- Carbohydrates 5g/kg: 2 cups cornflakes, 2 slices bread, 2 large bananas. 1 pint orange juice, 1 large potato, 2 large handfuls penne (cooked)

# Training once each day

(2hr court session)

Additional: Before training, during  
training, after training

# Training twice a day

Gym session – 1hr

2hr court session

Additional: Before training, during  
training, after training



**Sports  
Institute**  
Northern Ireland

# Competition

5 matches (~30mins)

Breakfast, Snacks, Dinner

# Summary

1. What should you eat?
2. When should you eat?
3. How much should you eat?

## **Factsheets:**

- Snack ideas
- Homemade recovery drinks
- Recovery factsheet

Original location:

<http://www.ulsterbadminton.com/wp-content/uploads/2011/09/Nutrition-Presentation-specific-for-Badminton.pdf>

provided here for posterity since the original is off the air as of 2020