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1

Why is nutrition important?



1.1

Food memories

人如其食 **Είστε ό, τι τρώτε**

KESIHATAN BERMULA DENGAN PEMAKANAN

YOU ARE 人如其食

WHAT YOU EAT

Είστε ό, τι τρώτε ANDA ADALAH APA YANG ANDA MAKAN

Τι - το, что ты ешь JE BENT WAT JE EET

SO ERES LO QUE COMES DER MENSCH IST, WAS ER IBT

जैसा खाओगे अन्न वैसा रहेगा मन।

IKAW AY KUNG ANO ANG KINAKAIN MO

KHUN KIN ARIA KHUN KOR PEN BAB NAN

人如其食 JE BENT WAT JE EET



Write down below what you remember most about food from your childhood (good or bad!).

We need to fuel our bodies properly if we want to be physically and mentally fit and healthy. You have probably been encouraged to eat healthily by your elders since you were a child. Perhaps they told you that some foods would make you grow stronger, taller or smarter.

Napoleon, one of the world's most well-known 17th century military leaders, strongly believed that "an army marches on its stomach". Just like soldiers, we all perform at our best when we are well fed.

Complete the quick quiz on the next page to see how much you already know about nutrition.

1.2

Quick Quiz

How much do you know already about the importance of nutrition!?

Take a few minutes to complete the quiz below.

1. True or false:

To eat healthily you should never eat bread or cake again, and only eat green vegetables?

2. True or false:

Eating well can help us manage our emotions?

3. Which of the following are proteins?

- a. nuts & seeds
- b. eggs
- c. lentils & beans
- d. mangoes
- e. yoghurt

4. How do you know roughly how much of each food type to eat?

- a. I just know!
- b. By measuring the weight of each ingredient
- c. By using a simple guide like your hand

5. Which of the following are mainly carbohydrates?

- a. rice
- b. pasta
- c. wholemeal bread
- d. citrus fruit

6. True or False:

Before going on watch it is best to eat a big meal, so you are not hungry whilst at work?

7. True or False:

Regularly getting a good night's rest helps you eat more healthily.

8. Approximately how much water do you think you should drink each day?

- a. a small glass with each meal
- b. none, I prefer fizzy drinks
- c. 1.5 litres maybe more if it's hot

9. Which of the following statements about eating and exercise are true?

- a. Don't eat anything in the hour before exercise because you may get a stomachache
- b. You should eat a big meal 2 hours before exercise, so you don't run out of energy
- c. Anyone doing exercise needs to have special sports nutrition
- d. Hydration is not important whilst you are exercising, only that you are working hard!
- e. None of the above

10. True or False:

Choosing the right foods and regularly eating well can help us think clearly and be more alert.

Answers to this quiz will be covered in the different sections of this programme, see if you can spot them!

(Answers can also be found on **page 25**)

1.3

How does healthy eating help me?

Fuel for your physical health



Tick which of the following are ways that eating healthily can help our bodies. Eating well....

Boosts immunity

Protects our bodies against certain types of diseases, such as obesity, diabetes and heart disease

Helps prevent some types of cancer and bone conditions

Helps keep our teeth healthy

Helps keep our bodies a healthy weight

Good food choices and healthy, balanced meals can help manage our weight and prevent disease. Eating the right things can improve our health and help our bodies respond better when we are ill.



Fuel for your mental health

Food is linked to your mood!

Research suggests that the food we eat can help with how we cope with our feelings¹, for example dealing with anxiety.



Write down some example foods that you like to eat when:

1. You are sad or stressed
2. You have been working hard
3. You are relaxing with friends or family at home

Compare this with the person sitting next to you. What do you notice about the foods you eat when you don't feel good?

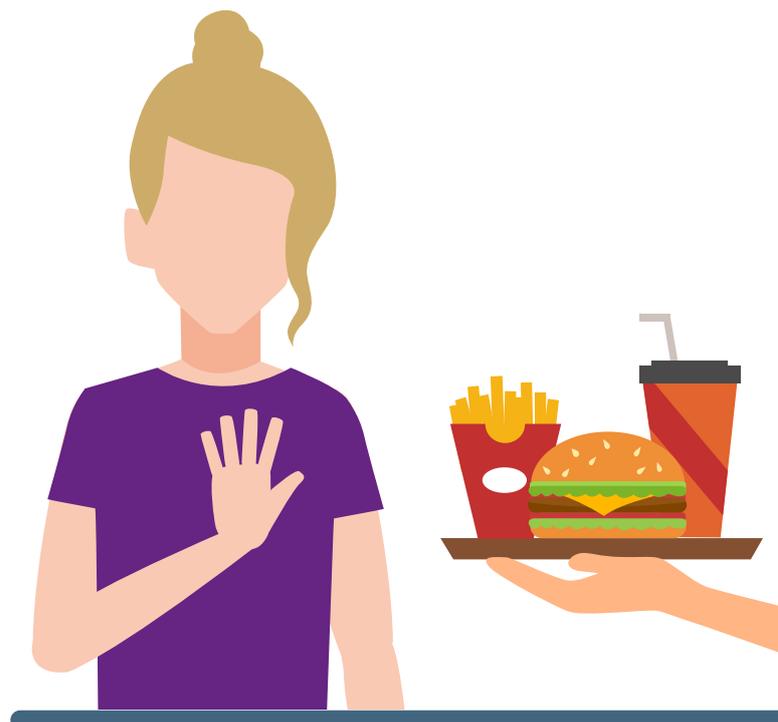
How we feel can sometimes influence what we eat, and we don't always make good choices.

For example, when we're feeling stressed or sad, or when we're busy, we might eat too much or too little. We might also be more likely to eat snacks or 'fast food'. These foods are often very high in sugar, salt, or bad fat and we like to eat them because they trigger the parts of our brain that are linked to reward and pleasure.

This makes them highly addictive and can mean we eat more than the recommended amounts of sugar, salt, bad fat, and calories.

Studies have shown that eating lots of these foods is particularly bad for our health, as it increases the risk of many diseases (e.g., diabetes, heart diseases, obesity).

If we slowly reduce the amount of these foods that we eat, or replace them with healthier alternatives, we can begin to change the way our brains work. This helps reduce how much we want them.



Fuel for energy and focus



True or False? Choosing the right foods can help us **be safe**. (See next page for answer)

Choosing the right foods can help us be safe.

A healthy, well-balanced diet can

- help us think clearly and feel more alert
- help improve concentration and attention span
- help us sleep better
- help prevent fatigue, poor decision-making, and slower reaction times

Research suggests that regularly eating food with the right nutrients will help keep our brains healthy and improve certain mental tasks, like our ability to concentrate. Choosing the right foods can also help us have higher levels of energy throughout our day

Good levels of energy and a healthy brain can help us with how we feel but importantly, can also help us be more productive and **be safe** by being more attentive at work.



2.1

Healthy vs unhealthy foods



Now you know some of the short- and long-term benefits of regularly eating food that is good for your physical and mental health, and which can also help you to stay safe.



Name some types of food that you think are healthy

Name some types of food you think are unhealthy

2.2

What should I eat?



Think about what you had to eat and drink yesterday. In this Buffet Exercise, write it in the appropriate blocks in the right hand column. (If you are not sure where your food items should go, there is some more help on the next page).

Grains

Vegetables

Fruits

Milk, yoghurt, cheese and/or alternatives

Lean Meat and Poultry, fish, eggs, tofu, nuts, seeds and legumes/beans



Which sections did you eat the most foods from?

Which sections did you eat the least foods from?

How many glasses of water did you drink?



Below are some more examples of foods within each group.



Grains

Breads - Wholemeal, wholegrain, white, rye, pita, lavash, naan, focaccia, crispbreads, damper

Breakfast cereals - Ready to eat, high fibre (wholegrain) oats, porridge, muesli, wholewheat biscuits

Grains - Rice, barley, corn, polenta, buckwheat, spelt, millet, sorghum, triticale, rye, quinoa, semolina

Other products - Pasta, noodles, English muffins, crumpets, rice cakes, couscous, bulgar, popcorn, flour.



Vegetables

Dark green or cruciferous/brassica
Broccoli, brussel sprouts, bok choy, cabbages, cauliflower, kale, lettuce, silverbeet, spinach, snow peas

Root/tubular/bulb vegetables
Potato, cassava, sweet potato, taro, carrots, beetroot, onions, shallots, garlic, bamboo shoots, swede, turnip

Legumes/beans
Red kidney beans, soy beans, lima beans, cannellini beans, chickpeas, lentils, split peas, tofu

Other vegetables
Tomato, celery, sprouts, zucchini, squash, avocado, capsicum, eggplant, mushrooms, cucumber, okra, pumpkin, green peas, green beans.



Fruits

Pome fruit such as apples and pears

Citrus fruit such as oranges, mandarins and grapefruit

Stone fruit such as apricots, cherries, peaches, nectarines and plums

Tropical fruit such as bananas, paw paw, mangoes, pineapple and melons

Berries

Other fruits such as grapes and passionfruit.

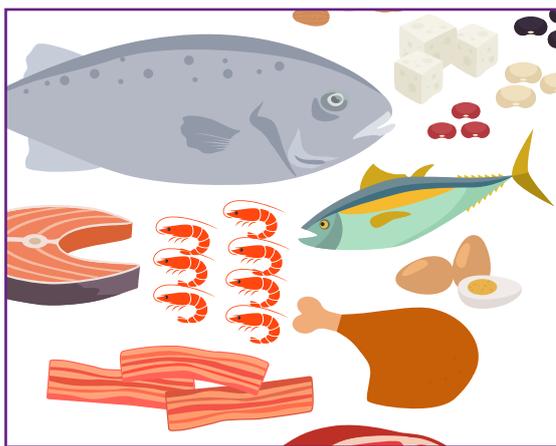


Milk, yoghurt, cheese and/or alternatives

Milks - All reduced fat or full cream milks, plain and flavoured, long life milks, powdered milk, evaporated milk, soy beverages (fortified with at least 100mg calcium/100mL)

Yoghurt - All yoghurts including reduced fat or full cream, plain and flavoured, soy yoghurt (calcium fortified)

Cheese - All hard cheeses, reduced or full fat, for example: Cheddar, red Leicester, Gloucester, Edam, Gouda, Soy cheeses (calcium fortified).



Lean Meat and Poultry, fish, eggs, tofu, nuts and seeds and legumes/beans

Lean meats - Beef, lamb, veal, pork, kangaroo, lean (lower salt) sausages

Poultry - Chicken, turkey, duck, emu, goose, bush birds

Fish and seafood - Fish, prawns, crab, lobster, mussels, oysters, scallops, clams

Eggs - Chicken eggs, duck eggs

Nuts and seeds - Almonds, pine nuts, walnuts, macadamia, hazelnut, cashew, peanuts, nut spreads, pumpkin seeds, sesame seeds, sunflower seeds, brazil nuts

Legumes/beans - All beans, lentils, chickpeas, split peas, tofu

2.3

How much should I eat?

Next time you have a meal there is a very easy measurement you can do just using your hand*:



**Protein
per serving**

Women: 1 palm
Men: 2 palms



**Vegetables
per serving**

Women: 1 rounded fist
Men: 2 rounded fists



**Carbohydrates
per serving**

Women: 1 cupped hand
Men: 2 cupped hands



**Fat
per serving**

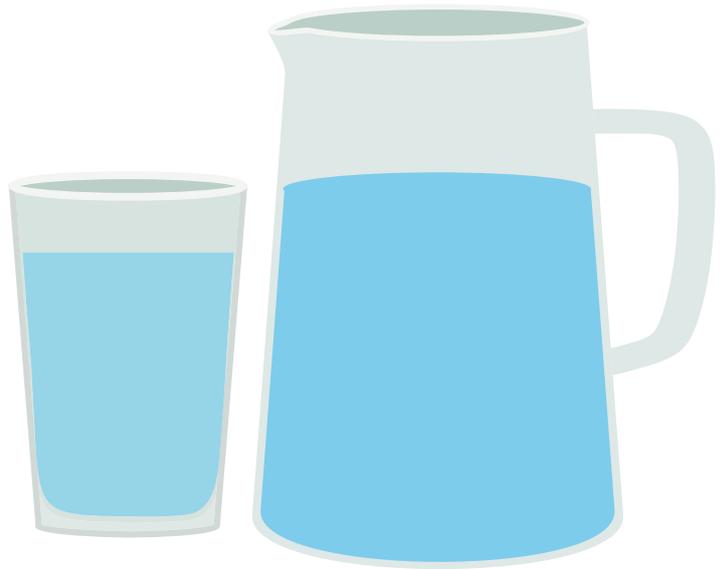
Women: 1 thumb
Men: 2 thumbs



Think again about the last meal you ate. Which foods would you eat more or less of in the future, or were the servings about right?

2.4

Keep hydrated



*** how much is enough? About 1.5 litres per day but drink more if urine appears dark when you go to the toilet. See the colour chart in the appendix for more detail.**

What we drink is as important as what we eat. About 60% of our body is water, so we need to drink enough of it to make sure our bodies can work!

Read the following summary:

Hydration is essential for:

- Keeping energy levels high and our brain functioning
- carrying nutrients and oxygen around the body
- being able to go to the toilet
- removing waste from the body
- normalizing blood pressure
- supporting joints
- protecting organs and tissues
- regulating body temperature

What about when it's hot?



Match up these 4 statements about what to do when it's hot, then read the information below:

1. Eat some spicy food
2. Eat fruit and vegetables that contain lots of water
3. Drink plenty of water
4. Eat some salty foods

Foods such as olives and pickles are a good for giving you energy and maintain your body balance

These help you stay hydrated (e.g., cucumber, celery, sweet peppers, lettuce, bok choy, watermelons, pineapples, berries)

Even though chili can make you feel warm, it can also help to lower your body temperature. It 'tricks' your brain into thinking the body is overheating causing you to sweat, which helps cool you down.

Staying hydrated is one of the best things you can do for your body and mind!

During summer or in hot climates, working in outdoor areas on the ship or in the engine room can be hard and often involves a lot of sweating!

Sweating helps to cool the body down but when we sweat, we lose water and electrolytes (e.g., "salts" such as sodium chloride and potassium).

For our bodies to be able to work properly, we need the right balance of water and electrolytes.

Fueling up on enough water and proper food to help our bodies get the right balance helps maintain our energy levels and keep us healthy.



Building healthy habits onboard



Think about your answer to the question in the buffet exercise 'how much did you drink' on **page 11**. Keep in mind if you were sweating a lot...

Be honest, do you drink enough water each day...

What changes will you make, if any?

How can you help other people make sure they are drinking enough water on your vessel?

2.2 What should I eat?

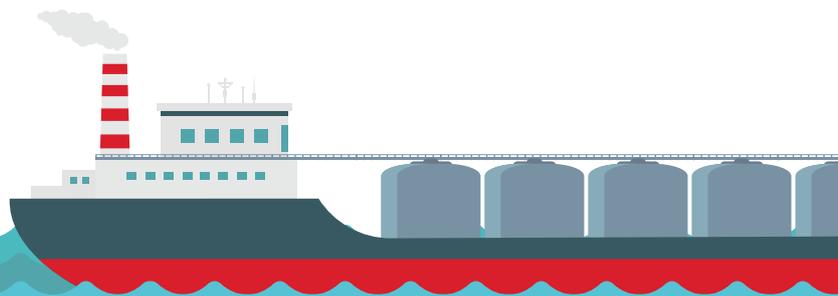
Think about what you had to eat and drink yesterday. In this Buffet Exercise, write it in the appropriate blocks in the right hand column. (If you are not sure where your food items should go, there is some more help on the next page).

Grains
Vegetables
Fruits
Milk, yoghurt, cheese and/or alternatives
Lean Meat and Poultry, fish, eggs, tofu, nuts, seeds and legumes/beans

Which sections did you eat the most foods? Which sections did you eat the least foods from? How many glasses of water did you

Page 11 Taken from <https://www.eatforhealth.gov.au/guidelines/australian-guide-healthy-eating>

Gradually make small changes. You will find it easier to do and that will help you build lasting healthy habits.



2.5

What to eat and when

Timing of the type of food you eat is important.

Eating the wrong things at the wrong time when preparing for work or whilst on watch can be bad for your health. It can make it hard to stay awake and/or get to sleep. It can also make you feel sick and have digestive problems, as well as put you at more risk of becoming overweight or having heart troubles.²

Look back at the plate you completed during the buffet exercise on page 11.

In the allocated slots on the next page, write down which foods you ate, what you drank and what activities you were doing.





Time I woke up:

Time I went to sleep:

01

Activity

Food/drink

02

Activity

Food/drink

03

Activity

Food/drink

04

Activity

Food/drink

05

Activity

Food/drink

06

Activity

Food/drink

07

Activity

Food/drink

08

Activity

Food/drink

09

Activity

Food/drink

10

Activity

Food/drink

11

Activity

Food/drink

12

Activity

Food/drink

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Food/drink

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Food/drink

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Food/drink

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Activity

Food/drink

23

Activity

Food/drink

24

Activity

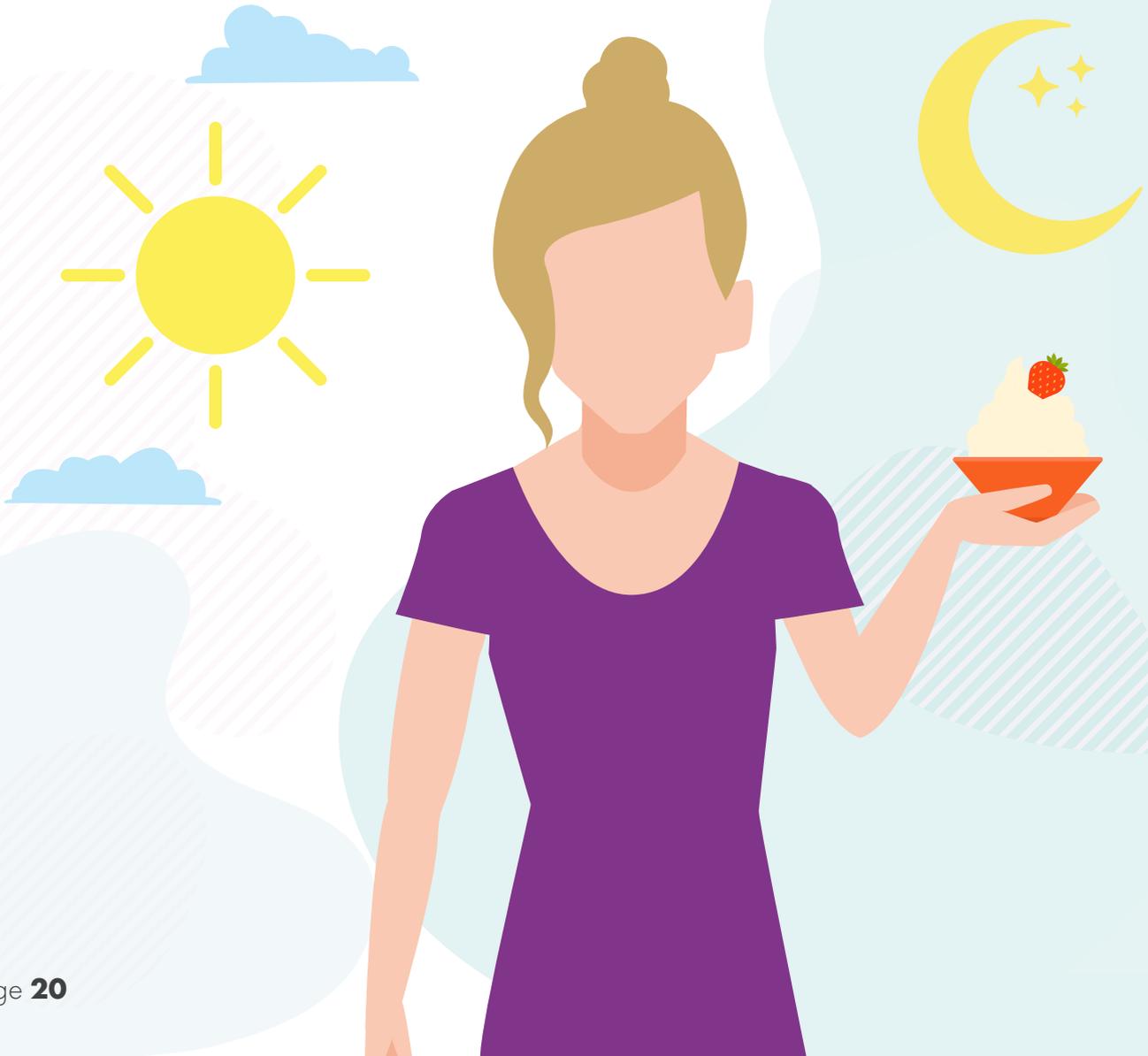
Food/drink

Group discussion



Eating certain foods at the right times can make a difference in how you feel. For example:

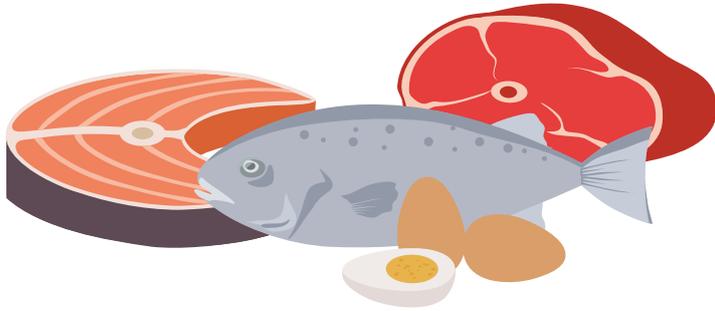
- 1.** At the beginning of your watch what did you eat?
- 2.** Towards the end of your watch what did you eat?
- 3.** Before bed what did you eat and drink?
- 4.** Did you drink a lot of caffeine?
- 5.** Did you eat heavy or light meals?



Below is a summary of the good practice you have just discussed

1. Before your watch

Eat protein rich food such as skimmed and half-fat milk, yoghurt, and lean meat. These foods give a slower and steady release of energy.



2. After your watch

Eat carbohydrate such as bread, potatoes, salad, pasta salad, fruit and whole grains. These foods help you to sleep better.



3. Before bed

Avoid the following directly before bedtime because these can make it more difficult to get to sleep.³

- Eating very spicy food
- Eating fried and fat food
- Eating sweets
- Drinking a lot of caffeine



4. Drinking caffeine

Caffeine is a stimulant. It can give you an energy boost when you need to be awake but can stop you from getting to sleep if you drink it too close to bedtime.

- Limit your intake of caffeinated drinks like coffee, energy drinks, and soda.
- Try to only consume caffeinated drinks early in the day or at least 4-6 hours before you plan to sleep.

If you drink a lot of caffeine during the day because you feel sleepy, ask yourself if there is a better way to manage your tiredness.

See [Fatigue Risk Management](#) for further information.



5. Eat light meals

On ship it is often not possible to give your body the time to digest a large meal.

- Eating soups, salads, and lean meat will keep you satisfied throughout your watch but will stop you from feeling overfull and tired.
- Eating a light meal before bed will give you a better night's sleep.

Sleep is important.

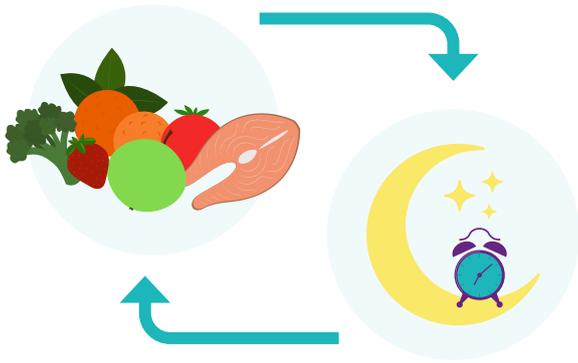


Food and sleep

Our bodies are made up of different systems, so it's important to think about how they all fit together.

Diet and sleep both have an effect on each other. As well as paying attention to what you eat and when, studies show that regularly eating a healthy, well-balanced selection of food, will help you get better sleep.

When you sleep well, it is easier to eat more healthily because your body produces higher levels of the hormone that controls your appetite, increases fat-burning and helps with muscle-building.



Food for exercise

It is even more important to eat the right types of food at the right time if you want to properly fuel a focused exercise routine on top of your daily activities.

You also need to pay attention to your body and what it needs. Eating a well-balanced diet can help you get the calories and nutrients you need, but it's important to balance what's good for you with what your body wants.



Look at the fuelling routine plan below and tick what could be good for you. There is information on the next page that can help you.

2 hours before your workout

- Drink a big glass of water
- Drink an extra-large protein shake
- Eat a 3-course meal
- Eat a low-fat yoghurt and a piece of fruit
- Eat and drink nothing until after sport
- Eat a small whole grain pasta salad with steamed vegetables

5-10 minutes before your workout

- Sip some water
- Drink an extra-large protein shake
- Eat a 3-course meal
- Eat a piece of fruit
- Eat and drink nothing until after sport
- Eat a small whole grain pasta salad with steamed vegetables

During your workout (normal exercise)

- Drink lots of water
- Drink small, frequent sips of water
- Eat a big sandwich

After your workout (20-60 minutes after focused exercise)

- Drink plenty of water
- Don't drink anything
- Drink a protein shake

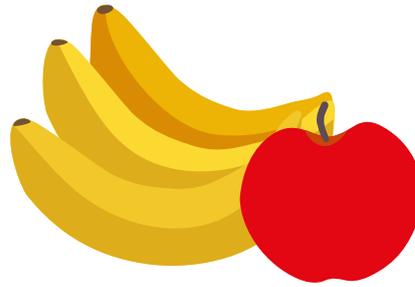
Below is a summary of the general guidelines and some additional information we have just discussed.

Note, these are general guidelines. We all have different bodies and what your body needs will depend on what type of workout you're doing. Take time to find out what works best for you.

1. BEFORE: It is important to fuel up. Not fueling up before your exercise is like "driving a car with no fuel in the tank". Ideally 2 hours before your workout:

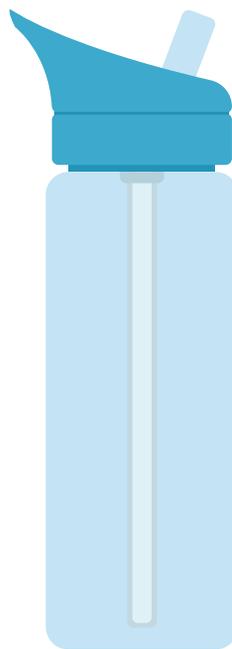
- Drink plenty of water
- Eat healthy carbohydrates and fruits and vegetables (e.g. whole-grain cereal (with low-fat or skimmed milk), whole-wheat toast, low-fat or fat-free yogurt, whole grain pasta, brown rice, fruit and vegetables)
- Avoid 'bad' (saturated) fats or large amounts of protein.

These types of fuels digest slower in your stomach. They take away oxygen and energy-delivering blood from your muscles.



2. BEFORE: If you only have 5-10 minutes before you exercise:

- Eat a piece of fruit such as an apple or banana.



3. DURING: keep your body hydrated

- Drink small, frequent sips of water

4. AFTER: refuel your tank.

You burn a lot of carbohydrates when you exercise. In the 20-60 minutes after your workout, your muscles can store carbohydrates and protein as energy and help in recovery. You also sweat when you exercise, and you need to rehydrate.

- Drink plenty of water. You can also blend your water with 100% juice such as orange juice which provides fluids and carbohydrates. Eat things with protein to help repair and grow your muscles.



3

Conclusion



3.1

Quick Quiz Answers

How much do you know already about the importance of nutrition!?

1. True or false:

To eat healthily you should never eat bread or cake again, and only eat green vegetables?

False.

[Learn more in the 'What is a healthy eating habit – what should I eat?' section](#)

2. True or false:

Eating well can help us manage our emotions?

True.

[Learn more in the 'How does healthy eating help me – Fuel for your mental health?' section](#)

3. Which of the following are proteins?

- a. nuts & seeds
- b. eggs
- c. lentils & beans
- d. mangoes
- e. yoghurt

Answers a, b, c, and e.

[Learn more in the 'What is a healthy eating habit – what should I eat?' section](#)

4. How do you know roughly how much of each food type to eat?

- a. I just know!
- b. By measuring the weight of each ingredient
- c. By using a simple guide like your hand

Answer c.

[Learn more in the 'What's a healthy eating habit – how much should I eat?' section](#)

5. Which of the following are carbohydrates?

- a. rice
- b. pasta
- c. wholemeal bread
- d. citrus fruit

Answers a, b and c.

[Learn more in the 'What is a healthy eating habit – what should I eat?' section](#)

6. True or False:

Before going on watch it is best to eat a big meal, so you are not hungry whilst at work?

False.

[Learn more in the 'What to eat and when – timing the types of food you eat' section](#)

7. True or False:

Regularly getting a good night's rest helps you eat more healthily.

True.

[Learn more in the 'What to eat and when – food and sleep' section](#)

8. Roughly how much water do you think you should drink each day?

- a. a small glass with each meal
- b. none, I prefer fizzy drinks
- c. 1.5 litres maybe more if it's hot

Answer c.

[Learn more in the 'Keep hydrated' section](#)

9. Which of the following statements about eating and exercise are true?

- a. Don't eat anything in the hour before exercise because you may get a stomachache
- b. You should eat a big meal 2 hours before exercise, so you don't run out of energy
- c. Anyone doing exercise needs to have special sports nutrition
- d. Hydration is not important whilst you are exercising, only that you are working hard!
- e. None of the above

Answer e.

[Learn more in the 'What to eat and when – food for focused exercise' section](#)

10. True or False:

Choosing the right foods and regularly eating well can help us think clearly and be more alert.

True.

[Learn more in the 'What's in it for me – fuel for energy and focus' section](#)

4 Appendix



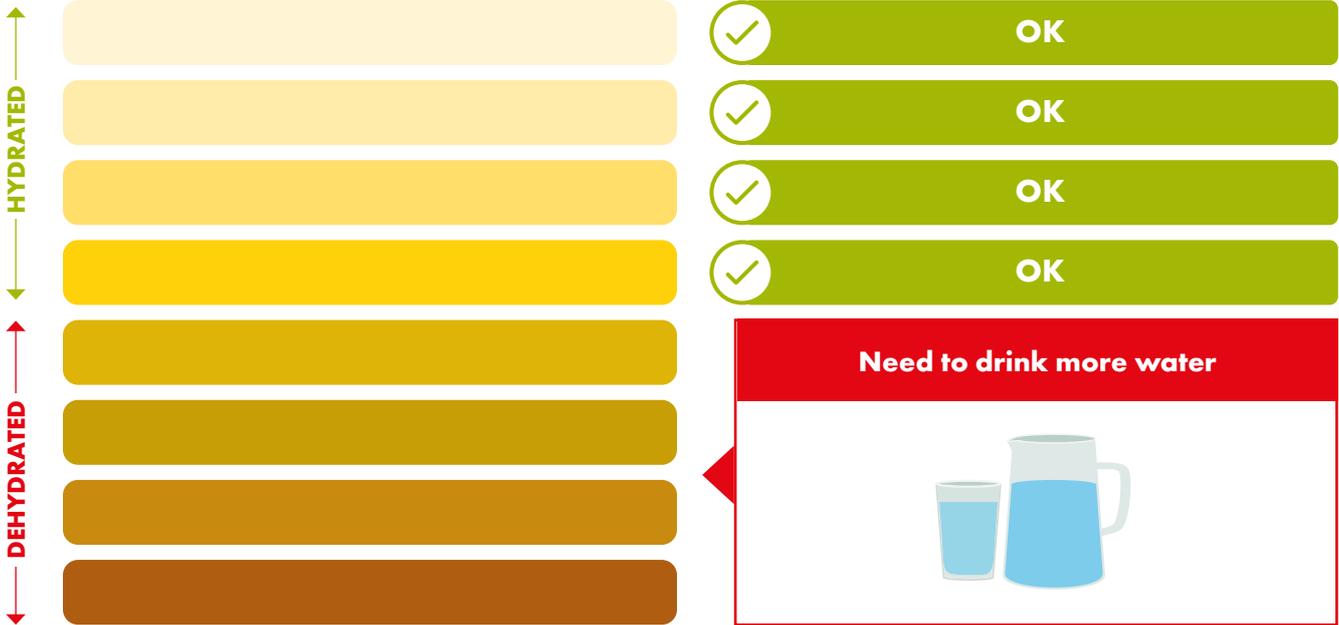
4.1

Are you hydrated enough?



You should drink about 1.5 litres per day, but drink more if your urine appears dark when you go to the toilet. See the colour chart below.

Take the urine colour test



4.2

Citations

Nutrition:

[A Dietitian Explains the Relationship Between Nutrition & Sleep Quality](#)

[Create the perfect meal with this simple 5-step guide](#)

[Australian Guide to Healthy Eating](#)

[Seafarers: Healthy food](#)

[Vitamins and sleep](#)

[Effects of Diet on Sleep Quality](#)

[Seafarer diet and performance and health](#)

Processed food:

[What are processed foods](#)

[The Many Health Risks of Processed Foods](#)

[Processed Foods and Health](#)

Water:

[7 Science-Based Health Benefits of Drinking Enough Water](#)

[How much water should you drink?](#)

[Fifteen benefits of drinking water](#)

[The Water in You: Water and the Human Body](#)

[Food as Fuel Before, During and After Workouts](#)

[Australian Dietary Guidelines Summary](#)

[Healthy Diet: Eating with Mental Health in Mind](#)

[Healthy Nutrition for Healthy Teeth](#)

[Eating Well for Mental Health](#)

[Foods linked to better brainpower](#)

[Nutritional psychiatry: Your brain on food](#)

[8 Hydrating Foods to Eat While Training in Hot Weather](#)

[How to Reduce Body Heat Quickly and Get Relief](#)

[Keeping Workers Hydrated and Cool Despite the Heat](#)

[Eating the Right Foods for Exercise](#)

[Diet and Exercise and Sleep](#)

[Nutrition and Sleep](#)