# alimentarium academy

- 4. The digestive system
- 4.4 Digestive phenomena

### 4.4.9

# Diarrhoea

### WHAT IS DIARRHOEA?

Diarrhoea corresponds to a larger volume and higher frequency of stools than usual. To put this into numbers, diarrhoea is characterised by having more than 300 grams of stool volume in a day and to producing stools more than three times in a day. Such stools are generally liquid, but in some cases just soft. In extreme cases, a person with diarrhoea can lose more than 20 litres of fluid in a day. This is why it is very important to drink water. Dehydration can have serious consequences, especially for children and the elderly. In industrialised countries, diarrhoea rarely leads to death, but in developing countries, it is the second leading cause of death in children under 5 years of age.

### WHAT ARE THE CAUSES?

Diarrhoea is not a disease in itself, but a symptom that generally lasts a day or two. It happens for several reasons, but it is generally related to three abnormal processes:

- 1. The colon does not absorb enough of the liquid contained in the stools
- 2. It receives too much liquid, or
- 3. The intestinal transit time is too fast and does not allow enough time for the stools to dry out.

We drink about 2 litres of liquid per day and the digestive tract produces 7 to 8 litres of digestive juices. This means that 9 to 10 litres of liquid pass through the intestines each day. About 99% of this liquid is reabsorbed, mainly in the intestines; but if this amount decreases by 1%, for one reason or another, it can trigger diarrhoea.

There are multiple reasons for this. Diarrhoea can be the result of food poisoning. The ingestion of bacteria, such as salmonella in contaminated food, will cause this type of poisoning. Viral infections, such as gastroenteritis, may also be the source. Viruses destroy the cells of the intestinal wall and prevent the intestines from absorbing enough liquid. Food intolerance (such as lactose intolerance) and intestinal diseases (like colonopathy) may also be the cause. Anxiety, stress and other intense emotions can also trigger diarrhoea. Some medication (like antibiotics) can alter the intestinal flora and reduce absorption through the intestinal wall.

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## 4.4.9 Diarrhoea

| Which of the following does not describe stools during a bout of diarrhoea?  O Frequent O Voluminous | Diarrhoea can be caused by bacteria such as salmonella.  O False O True                           |
|--|---|
| O Hard   | People with lactose intolerance never get diarrhoea.  |
| What frequency of bowel movements indicates a bout of diarrhoea?                                     | O False<br>O True   |
| O Five times a day O Once a day O Three times a day  | When suffering from diarrhoea, the large intestine does not absorb enough of the fluid in stools. |
| How many grams of stools does the body produce a day during a bout of diarrhoea?                     | O True<br>O False   |
| O 1000 g<br>O 300 g  | Which of the following emotions, when experienced intensely, does not cause diarrhoea?            |
| O 100 g  | O Stress  |
| In cases of severe diarrhoea, how many litres of fluid can the body lose per day?                    | O Happiness<br>O Anxiety  |
| O More than 5 litres O More than 20 litres O More than 50 litres                                     | Antibiotics cause diarrhoea when they modify  |
|  | O intestinal flora  |
|  | O nutrients   |
| Which age group is the least at risk of dehydration caused by diarrhoea?                             | O acidity   |

O The elderly
O Adults
O Children

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## **Answers**

# Which of the following does not describe stools during a bout of diarrhoea?

## O Frequent

Wrong! Try again!

### **O Voluminous**

Wrong! If you have diarrhoea, your stools contain more water and are generally more voluminous.

#### Hard

Well done! If you have diarrhoea, your stools are generally more liquid.

# What frequency of bowel movements indicates a bout of diarrhoea?

### O Five times a day

Wrong! The correct answer is less than that.

### O Once a day

Wrong! That's the normal frequency.

### Three times a day

Well done! Three or more bowel movements per day could indicate a case of diarrhoea.

# How many grams of stools does the body produce a day during a bout of diarrhoea?

## O 1000 g

Wrong! That's far too much.

### ● 300 g

Well done! If you produce more than 300 g of stools per day, this is considered a case of diarrhoea.

## O 100 g

Wrong! It's more than that.

# In cases of severe diarrhoea, how many litres of fluid can the body lose per day?

### O More than 5 litres

Wrong! It's more than that.

## ● More than 20 litres

Well done! That's right!

### O More than 50 litres

Wrong! It's less than that.

# Which age group is the least at risk of dehydration caused by diarrhoea?

### O The elderly

Wrong! An elderly person's body contains less water, so this age group is highly sensitive to dehydration when suffering from diarrhoea.

### Adults

Well done! Adults are the least at risk of dehydration. However, when they have diarrhoea they need to drink plentifully to compensate for the loss of water.

### O Children

Wrong! Children have very little water reserves.

# Diarrhoea can be caused by bacteria such as salmonella.

#### O False

Wrong! Try again!

#### ● True

Well done! Salmonella can cause food poisoning, which can lead to diarrhoea.

# People with lactose intolerance never get diarrhoea.

#### False

Well done! Diarrhoea is in fact one of the symptoms of lactose intolerance.

#### O True

Wrong! That is not the right answer.

# When suffering from diarrhoea, the large intestine does not absorb enough of the fluid in stools.

#### ● True

Well done! This is one of the reasons why stools are more voluminous and liquid.

### O False

Wrong! That's not right.

# Which of the following emotions, when experienced intensely, does not cause diarrhoea?

### **O Stress**

Wrong! Stress can in fact stimulate intestinal movement. Stools travel through the colon faster and less water is absorbed.

### Happiness

Well done! That's right!

### O Anxiety

Wrong! Anxiety can stimulate intestinal movement. Stools travel through the colon faster and less water is absorbed.

# Antibiotics cause diarrhoea when they modify...

### intestinal flora

Well done! Antibiotics can destroy the bacteria in your intestinal flora.

## O nutrients

Wrong! Try again!

### O acidity

Wrong! That is not the right answer.