

Exercise A : Complete the text using: **via of to from on for in**

The nutrients.... foods are the same nutrients which microbes need their growth, therefore food spoilage is inevitable. However, most infectious agents do not multiplyfoods, but use them as vectors gain entrance the human body.

Many organisms can cause food poisoning, including *Bacillus cereus*, *Campylobacter jejuni*, *Clostridium perfringens*, *Escherichia coli*, *Salmonella typhimurium*, *Staphylococcus aureus*, *Vibrio parahaemolyticus*, and *Yersinia enterocolitica*. Infection usually causes the same basic symptoms acute gastroenteritis, abdominal discomfort and pain, and diarrhea, but symptoms vary mild gastric distress death depending the type of bacterial infection. Transmission is usually the faecal/oral route with the ingestion the pathogen contaminated food.

Exercise B: Match the underlined words and their meanings.

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|--------------|-----------------------|
| 1. roughly | origin |
| 2. held | top (of a table etc.) |
| 3. allow | dangerous |
| 4. raw | permit |
| 5. hazardous | about |
| 6. surface | conserved |
| 7. source | uncooked/untreated |

Exercise C: Divide the text into sentences and punctuate correctly.

food borne diseases affect roughly seventy six million people each year in the usa the bacteria which cause most epidemics are salmonella campylobacter and shigella more recently such mutant strains as escherichia coli listeria monocytogenes and cyclospora cayetanensis have become more common

meat held at room temperature often invites bacteria from the enterobacteriaceae family this also happens with strains of staphylococci micrococci, and aerobic gram positive spore forming bacilli refrigeration suppresses these microbes but can allow the growth of other organisms such as pseudomonas consumption of raw meats fish and milk is hazardous and should be avoided salads prepared in restaurants where meats and vegetables share a common surface during preparation are also a potential source of infection

Exercise D: Read about the effects of spoilage and decide if the following sentences are TRUE or FALSE. Identify the part of the text which contains the relevant information and correct the FALSE sentences.

Effects of spoilage

Colour can often indicate the type of microbe involved in food spoilage:

- Black spots on meat are caused by *Cladosporium* species.
- White spots are due to *Sporotrichum carnis*.
- Yellow or green spots form as a result of the *Penicillium* species.
- A rainbow effect, often seen on bacon and fish, is caused by a spoilage bacteria known as Photobacteria that can break down ATP to produce visible light. After a couple of days, this bacterium can grow sufficiently to enable raw fish to glow in the dark!

Spoiled milk is caused by such organisms as *Lactococcus cremoris* or *Enterobacter aerogenes*, leaving the milk to form unpleasant strands. Various strains of clostridium can also cause milk to spoil.

Listeria monocytogenes is a Gram-positive bacillus capable of growing at temperatures of 0°C and lower. It is relatively heat-resistant, having been isolated from pasteurized products. Another reason it is an easy microbe to pass on is that it can remain on the hands for at least eight hours and is not easily removed by conventional hand-washing. Foods associated with this microbe are soft cheeses, patés, and raw vegetable dishes. Pre-cut foods are most at risk for developing *listeria* contamination. Most people remain relatively unaffected, except for pregnant women and newborn babies, who can develop fatal cases of meningitis and/or septicaemia.

TRUE or FALSE?

1. All spoilage microbes cause food to change colour.
2. Black and white spots on meat are caused by different organisms.
3. *Penicillium* bacteria appear as green or yellow areas on food.
4. Photobacteria are not common on bacon and fish.
5. Fish affected by photobacteria can produce light.
6. More than one type of organism can spoil milk.
7. *L. monocytogenes* dies at low temperatures.
8. Pasteurisation eliminates *L. monocytogenes*.
9. *L. monocytogenes* does not affect most healthy people.
10. Pregnant women should not eat raw vegetables.